Present Value of Future Cost

Folder: Parker Landfill Project Name: Parker Landfill Project ID: Parker Landfill Site Name: Alternative 1

Location: VERMONT STATE AVERAGE, VERMONT Report Option: Fiscal

Initial Phase Element Start Date: 2/1/2004

ite	Type: Grou	ındwater
:Ho	ID: Parker	andfill

One ID: 1 Birker Carianiii																	
Year Fiscal Year		1 2004	2 2005	3 2006	4 2007	5 2008	6 2009	7 2010	8 2011	9 2012	10 2013	11 2014	12 2015	13 : 2016	14 2017	15 2018	16 2019
Cost Type	Description	2004	2000	4400	2001	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Studies	Pre-Design Investigation	\$ 385,481		•			1										
Remedial Design	Design	\$ 1,252,247					:						-				
Remedial Action	Advanced Oxidation Processes	\$ 304,882						i				1					
Remedial Action	Carbon Adsorption (Gas)	. \$ 27,479		· ·				:									
Remedial Action	Carbon Adsorption (Liquid)	\$ 53,371			:							· i	-				
Remedial Action	Coagulation/Flocculation	\$ 4,491										i					
Remedial Action	Discharge to POTW	\$ 30,804								·····		:				:	
Remedial Action	Groundwater Monitoring Well	\$ 78,076						 				· i					
Remedial Action	Groundwater Extraction Wells	\$ 106,710					7	i		1			i			i	
Remedial Action	Media Filtration	\$ 73,466	:				1			j		·					
Remedial Action	Miscellaneous Field Installation	\$ 63,254					 					:					
Remedial Action	Metals Precipitation	\$ 122,625				 	1			1				إ			
Remedial Action	Metals Precipitation	\$ 154,626								1				:	:	•	
Remedial Action	Overhead Electrical Distribution	\$ 15,189	<u> </u>					·				i					
Remedial Action	Off-site Transportation and Waste Disposal	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152,700
Remedial Action	Professional Labor Management	\$ 3,291,176		,							* /02,100	102,700	102,100	102,100	102,700	102,700	102,700
Remedial Action	ION EXCHANGE	\$ 641,230					<u> </u>						i				
Remedial Action	Residual Waste Management	\$ 4,047	· · · · · · · · · · · · · · · · · · ·							1 .							
Long Term Monitoring	GW Monitoring	\$ 101,925	\$ 152,811 :	\$ 152.811	\$ 152,811	\$ 152,811	\$ 131,091	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,247
Long Term Monitoring	5 YR Review Year 05				,	*	\$ 32,680			1 12,211	* 124,211	,	120,217	,	· Luje II	V 140 (p 11	
Long Term Monitoring	5 YR Review Year 10											\$ 32,680		;			
Long Term Monitoring	5 YR Review Year 15									 							\$ 32,680
Long Term Monitoring	5 YR Review Year 20							: :				:					02,000
Long Term Monitoring	5 YR Review Year 25		;									:		:			
Long Term Monitoring	5 YR Review Year 30									·		:			i		
O&M	Miscellaneous Support Costs	\$ 924,581	\$ 871,501	\$ 984,128	\$ 871,501		\$ 139,425	\$ 871,501	\$ 984,128	\$ 871,501			\$ 871,501	\$ 984,128	\$ 871,501		\$ 139,425
O&M	Groundwater Extraction Wells	\$ 9,399	\$ 16,112		\$ 16,112	\$ 16,112		-		 -	\$ 16,112	.				\$ 16,112	<u>.</u>
O&M	Media Filtration	\$ 17,948			\$ 30,768					· · · · · · · · · · · · · · · · · · ·		\$ 30,768		- !			\$ 30,768
O&M	Carbon Adsorption (Liquid)	\$ 27,244	\$ 44,550		\$ 36,392					\$ 33,396		\$ 33,087					
O&M	Coagulation/Flocculation	\$ 33,925	\$ 58,157		\$ 58,157	-											· · · · · · · · · · · · · · · · · · ·
O&M	Metals Precipitation	\$ 40,860	\$ 63,478		\$ 38,619		1					\$ 28,550					\$ 27,335
O&M	Metals Precipitation				\$ 132,564			· · · · · · · · · · · · · · · · · · ·				\$ 125,266					
O&M	Advanced Oxidation Processes	\$ 381,910	\$ 654,703		\$ 654,703							\$ 654,703					
O&M	Carbon Adsorption (Gas)	\$ 30,096	\$ 49,201		\$ 40,144		+					\$ 36,476					- i -
O&M	Discharge to POTW	\$ 3,647	\$ 6,252		\$ 6,252		-	<u></u>		+	•						
Site Close-out	Site Closeout	1 1111	4 0,202		• 0,506	V 0,202	0,202	- 0,202	0,202	0,202	0,202	0 0,202	0,202	,202	U 0,202	0 0,202	0,202
Sub-Total		\$ 8,424,007	\$ 2,250,818	\$ 2,328,294	\$ 2,190,723	\$ 1,309,584	\$ 1,454,754	\$ 2,140,017	\$ 2,250,376	\$ 2,136,090	\$ 1,263,320	\$ 1,294,998	\$ 2,133,008 j	\$ 2,244,966	\$ 2,131,776	\$ 1,259,795	\$ 1,431,486
Reat Discount	6.95%	0.9363	0.8768	0.8209	0.7687			0.6311	0.5909		0.5181	0.4851	0.4542	0.4253	0.3982	0.3729	0.3491
Nominal Discount	8.70%	0.9200	0.8463	0.7786	0.7163			0.5577	0.5131		0.4342	0.3995	0.3675	0.3381	0.3110	0.2861	0.2632
Inflation Total	1.75%	1.0178	1.0359	1.0544				1.1315	1,1517		1.1931	1.2143	1.2360	1.2580	1.2804	1.3032	1.3264
- Clai		\$ 7,887,813	a 1,973,405 (1,911,400	\$ 1,683,988	\$ 942,590	\$ 980,431	\$ 1,350,462	\$ 1,329,714	\$ 1,181,845	\$ 654,474	\$ 628,183	\$ 968,829	\$ 954,778	\$ 848,930	\$ 459,752	\$ 499,797

Present Value of Future Cost

Folder: Parker Landfill
Project Name: Parker Landfill
Project ID: Parker Landfill
Project ID: Parker Landfill
Site Name: Alternative 1
Site Type: Groundwater
Site ID: Parker Landfill

Year			17	18	19	20	21	22	23		24	25	26	27	28	29	30	31	Ţ
Fiscal Year			2020	2021	2022	2023	2024	2025	2026	1 :	2027	2028	2029	2030	2031	2032	2033	2034	1
Cost Type	Description								<u> </u>										Total
Studies	Pre-Design Investigation			-						•					1			<u> </u>	\$ 385,481
Remedial Design	Design								<u> </u>										\$ 189,500
Remedial Action	Advanced Oxidation Processes							1				!							\$ 304,882
Remedial Action	Carbon Adsorption (Gas)		ļ	i]]			i			·				\$ 27,479
Remedial Action	Carbon Adsorption (Liquid)						<u>,</u>	T											\$ 53,371
Remedial Action	Coagulation/Flocculation																		\$ 4,491
Remedial Action	Discharge to POTW						İ	İ					İ		- :	- i			\$ 30,804
Remedial Action	Groundwater Monitoring Well				`		i	İ	† · · ·										\$ 78,076
Remedial Action	Groundwater Extraction Wells							 	 			Ì						L	\$ 106,710
Remedial Action	Media Filtration														· · · · - !			i	\$ 73,466
Remedial Action	Miscellaneous Field Installation						;								1				\$ 63,254
Remedial Action	Metals Precipitation		i						 -						i			ļ	\$ 122,625
Remedial Action	Metals Precipitation							- -	ļ			· ·				-+		<u>.</u>	\$ 154,626
Remedial Action	Overhead Electrical Distribution	i						+	ļ				+				· · · · · · · · · · ·	-	\$ 15,189
Remedial Action	Off-site Transportation and Waste Disposal	s	152,700	\$ 152,699 \$	152,699	\$ 152,699	\$ 152,699	\$ 152,699	\$ 152,6	nn e	152,699	\$ 152.699	152,699	152,699	\$ 152,699	E 450 600 E	152,699	i i	\$ 4.580.987
Remedial Action	Professional Labor Management		102,700	9 102,000	132,089	102,000	φ 132,088	\$ 152,099	\$ 102,0	99 . 4	132,089	\$ 152,099	132,689	102,099	\$ 152,699	\$ 152,099 \$	152,699		1 1/1-1-1-1
Remedial Action	ION EXCHANGE									- :									\$ 3,291,176
Remedial Action	Residual Waste Management						· · · · · · · · · · · · · · · · · · ·	1	1	-:-								<u> </u>	\$ 641,230
	·		400.047						1						_				\$ 4,047
Long Term Monitoring	GW Monitoring	\$	120,247	\$ 120,247 \$	120,247	\$ 120,247	\$ 120,247	\$ 120,247	\$ 120,2	47 \$	120,247	\$ 120,247 \$	114,585	\$ 111,758	\$ 111,758	\$ 111,758 \$	111,758	\$ 37,215	\$ 3,727,785
Long Term Monitoring	5 YR Review Year 05								:	_									\$ 32,680
Long Term Monitoring	5 YR Review Year 10																	<u> </u>	\$ 32,680
Long Term Monitoring	5 YR Review Year 15						<u> </u>		i										\$ 32,680
Long Term Monitoring	5 YR Review Year 20						\$ 32,680									. l.		<u> </u>	\$ 32,680
Long Term Monitoring	5 YR Review Year 25						l						32,680					İ	\$ 32,680
Long Term Monitoring	5 YR Review Year 30											1						\$ 32,680	\$ 32,680
O&M	Miscellaneous Support Costs	\$	871,501	\$ 984,128 \$	871,501		j	\$ 871,501	\$ 984,1	28 \$	871,501	1	139,425	\$ 871,501	\$ 984,128	\$ 871,501 ;			\$ 17,705,636
M&O	Groundwater Extraction Wells	\$	16,112	\$ 16,112 \$	16,112	\$ 16,112	\$ 16,112	\$ 16,112	. \$ 16, 1	12 \$	16,112	\$ 16,112 \$	16,112	\$ 16,112	\$ 16,112	\$ 16,112 5	16,112	\$ 6,713	\$ 483,360
M&O	Media Filtration	\$	30,768	\$ 30,768 \$	30,768	\$ 30,768	\$ 30,768	\$ 30,768	\$ 30,7	68 \$	30,768	\$ 30,768 \$	30,768	\$ 30,768	\$ 30,768	\$ 30,768	30,768	\$ 12,820	\$ 923,040
M&O	Carbon Adsorption (Liquid)	\$	32,640	\$ 32,597 \$	32,559	\$ 32,526	\$ 32,494	\$ 32,467	\$ 32,4	42 \$	32,419	\$ 32,398 \$	32,379	\$ 32,361	\$ 32,345	\$ 32,330 \$	32,316	\$ 13,462	\$ 1,016,519
O&M	Coagulation/Flocculation	\$	58,157	\$ 58,157 \$	58,157	\$ 58,157	\$ 58,157	\$ 58,157	\$ 58,1	57 \$	58,157	\$ 58,157 \$	58,157	\$ 58,157	\$ 58,157	\$ 58,157 \$	58,157	\$ 24,232	\$ 1,744,710
O&M	Metals Precipitation	\$	27,186	\$ 27,055 \$	26,939	\$ 26,835	\$ 26,742	\$ 26,659	\$ 26,5	82 \$	26,513	\$ 26,449 \$	26,391	\$ 26,337	\$ 26,288	\$ 26,242 \$	26,199	\$ 10,909	\$ 929,322
O&M	Metals Precipitation	\$	124,277	S 124,182 \$	124,098	\$ 124,023	\$ 123,955	\$ 123,894	\$ 123,8	39 \$	123,789	\$ 123,743 \$		\$ 123,662					
O&M	Advanced Oxidation Processes	\$	654,703	\$ 654,703 \$	654,703	\$ 654,703	\$ 654,703	\$ 654,703	\$ 654,7	03 \$	654,703	\$ 654,703 \$		\$ 654,703	\$ 654,703	de la calific			
O&M	Carbon Adsorption (Gas)	s	35,979	\$ 35,931 \$	35,889	\$ 35,851	\$ 35,817	<u> </u>			35,734	\$ 35,711 \$		\$ 35,670	\$ 35,652	<u> </u>			
O&M	Discharge to POTW	\$	6,252	\$ 6,252 \$			\$ 6,252	<u> </u>		52 \$	6,252	\$ 6,252		6,252	\$ 6,252				
Site Close-out	Site Closeout		-,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		* 0,202	0,202	4 0,202		.02	U,ZUL	0,202	0,202	, 0,202	0,202	<u> </u>	0,202	\$ 201,936	
Sub-Total		\$	2,130,522	\$ 2.242.831 \$	2,129,924	\$ 1,258,172	\$ 1,290,626	\$ 2,129,246	\$ 2,241.6	88 \$ 1	2.128.894	\$ 1.257,239 5	1,423,540 8	2,119,980	\$ 2.232.487	\$ 2,119,749 \$	1,248,144		
Real Discount	6.95%		0.3269	0.3061	0.2866	0.2684	0.2513			203	0.2063	0.1932	0.1809	0.1694	0.1586	0.1485	0.1390		
Nominal Discount	8.70%		0.2422	0.2228	0.2049	0.1886				468	0.1350	0.1242	0.1143	0.1051	0.0967	0.0890	0.0819		
Inflation	1.75%		1.3500	1.3741	1.3986	1.4235	1.4486			009	1.5276	1.5548	1.5825	1.6107	1.6394	1.6686	1.6983		
Total		\$	696,515	\$ 686,560 \$	610,498	\$ 337,674	\$ 324,337	\$ 501,025	\$ 493,9	909 \$	439,201	\$ 242,865 8	257,487	359,050	\$ 354,038	\$ 314,763 \$	173,541	\$ 88,748	\$ 30,146,602

Site Cost Over Time

Folder: Parker Landfill

Project Name: Parker Landfill Location: VERMONT STATE AVERAGE, VERMONT

Report Option: Fiscal

Project ID: Parker Landfill

Site Name: Alternative 1 Initial Phase Element Start Date: 2/1/2004

Site Type: Groundwater

Site ID: Parker Landfill

Site ID: Parker Landfill																										
Year			1 .		2	3		4	5	\top	6	7		8		9	10	1	1	12		13	14	15	T.	16
Calendar Year		ŀ	2004	2	005	2006		2007 j	2008		2009	2010		2011	1	2012	2013	20	14	2015	į	2016	2017	2018	i	2019
Phase Element	Phase Element Name		_ :					1		İ											ļ				:	
Studies	Pre-Design Investigation	\$	385,481				T			\top			1												i i	
Remedial Design	Design	\$	1,252,247				1	:					•								_					
Remedial Action	Advanced Oxidation Processes	\$	304,882							1	· · · ·										1 1					
Remedial Action	Carbon Adsorption (Gas)	\$	27,479							1																
Remedial Action	Carbon Adsorption (Liquid)	\$	53,371							- :			-		:						i					
Remedial Action	Coagulation/Flocculation	s	4,491					i i		÷ -			:								1		;		i	
Remedial Action	Discharge to POTW	\$	30,804							•			1-								-					
Remedial Action	Groundwater Monitoring Well	\$	78,076	-									İ								:					
Remedial Action	Groundwater Extraction Wells	s	106,710				!	İ															- i			
Remedial Action	Media Filtration	\$	73,466	_			:		-		İ											:	——-i			
Remedial Action	Miscellaneous Field Installation	\$	63,254					. —									—									
Remedial Action	Metals Precipitation	\$	122,625				-						+		• • •	-							!			
Remedial Action	Metals Precipitation	\$	154,626															· · · -	1							
Remedial Action	Overhead Electrical Distribution	\$	15,189							-			1													
Remedial Action	Off-site Transportation and Waste	L S	152,700	S 1	152,700	152,700	: S	152,700 \$	152,70	o s	152,700	\$ 152,700) s	152,700	s	152,700 \$	152,700	\$ 1	2,700	\$ 152,70	n c	152,700 \$	152,700	 S 1E2	700 \$	152,700
Remedial Action	Professional Labor Management	\$	3,291,176		,,,,,,	,,	 .			1	102,100		-	102,700	*	102,700 4		Ψ 1.	72,100	w 102,10	,	132,100	132,700	J 102,	700 \$	102,700
Remedial Action	ION EXCHANGE	\$	641,230							* }			+-			·							- :			
Remedial Action	Residual Waste Management	\$	4.047		-			!		+									- i			i				
Long Term Monitoring	GW Monitoring	\$	101,925	S 1	152,811	152,811	\$	152,811 \$	152,81	1 \$	131,091	5 120,247	, ,	120,247	•	120,247 \$	120,247	¢ 1	20,247	\$ 120,24	7 \$	120,247 \$	120,247	¢ 100	247 \$	120,247
Long Term Monitoring	5 YR Review Year 05	-				102,011		102,011	102,01	\$	32,680	ψ 120,2 ⁻⁴	1	120,27		120,247	120,247	Ψ 1.	0,247	4 120,25		120,247	120,247	3 120,	241 5	120,247
Long Term Monitoring	5 YR Review Year 10	İ			i		1	-		+			+	i				S :	32,680			· · · · · · · · · · · · · · · · · · ·				
Long Term Monitoring	5 YR Review Year 15				-, -		-	<u> </u>					+			 : -		φ ,	12,000		-:				\$	32,680
Long Term Monitoring	5 YR Review Year 20	•					_			+			+								+	——-i			• •	32,000
Long Term Monitoring	5 YR Review Year 25						 			+			+								+					
Long Term Monitoring	5 YR Review Year 30							- i					+										-		-	
O&M	Miscellaneous Support Costs	\$	924,581	\$ 8	371,501	984,128	s	871,501		-	139,425	\$ 871,501	1 \$	984,128	•	871,501				\$ 871,50	u m	984,128 \$	074 F04			100 105
O&M		: \$	9,399		16,112 ! :		_	16,112 \$	16,11	2 \$	16.112		_	16,112		16,112 \$	16,112	\$	16,112				871,501		\$	139,425
O&M	Media Filtration	\$	17,948		30,768		+	30,768 \$		_	30,768	·			\$	30,768 \$	30,768	-			- 1 '	16,112 \$	16,112		112 5	16,112
O&M	Carbon Adsorption (Liquid)		27,244		44,550		s	36,392 \$			34,375		+-		\$			-				30,768 \$	30,768		768 : \$	30,768
O&M	Coagulation/Flocculation	. \$	33,925		58,157		\$	58,157 \$		— ·	58,157 : 3				\$	33,396 \$ 58,157 \$	33,223 58,157		33,087		_	32,886 \$	32,810		745 \$	32,689
O&M	Metals Precipitation	\$	40,860		63,478		- -	38,619 \$		_	32,475			30,176	-		28,965		8,157			58,157 \$	58,157		157 \$	58,157
O&M	Metals Precipitation	\$			150,585		\$	132,564 \$		_	128,110								,	\$ 28,21		27,938 \$	27,705		506 \$	27,335
O&M	Advanced Oxidation Processes	: \$	381,910		354,703		- s	654,703 \$			654,703			654,703		125,946 \$	125,566 654,703		25,266		—	124,822 \$	124,653		509 \$	124,385
O&M	Carbon Adsorption (Gas)	\$	30,096		49,201		+	40,144 \$		-	37,906			37,068				-		\$ 654,70		654,703 \$	654,703		703 \$	654,703
O&M	Discharge to POTW	\$	3,647		6,252		s	6,252 \$			6.252						-	-	-	\$ 36,35		36,253 \$	36,168		096 \$	36,033
Site Close-out	Site Closeout	+	3,047	Ψ	U,ZJZ	, 0,232		0,202 \$	0,23	Z D	0,202	ø 0,252	. >	6,252	\$	6,252 \$	6,252	\$	6,252	5 6,25	2 \$	6,252 \$	6,252	» 6,	252 \$	6,252
Current Work Estimate (C		\$	8,424,007	\$ 2.2	250.818	2,328,294	\$ 2	2.190.723 : \$	1.309 58	4 \$	1,454,754	\$ 2 140 017	· . \$	2,250,376	\$ 2	136 090 \$	1,263,320	\$ 12	14 908	\$ 2 133 00	j 8 8	2.244.966 \$	2 131 778	\$ 1250	705 : \$	1 /31 /96
Super. & Admin. (S&A)	8.00%	\$	673,921	\$ 1	180,065		\$	175,258 \$	104,76		116 380	\$ 2,140,017 \$ 171,201				170,887 \$	101,066			\$ 2,133,00 \$ 170,64		179,597 \$			784 \$	1,431,486
Super. & Review (S&R)	3,50%	\$	294,840		78,779	81,490		76,675 \$				74,901	ı i ş	78,763	\$	74,763 \$	44,216	\$ 4	5,325	\$ 74,65	5 \$	78,574 \$	74,612	\$ 44,	093 \$	50,102
Eng. Des./Const. Escalation Factor	1.50%	\$	126,360 1.0322	\$	33,762 1.0549	34,924 1.0781		32,861 \$ 1.1019	19,64 1,126		21,821 5 1.151	\$ 32,100 1.176		33,756 1.2023	\$	32,041 \$ 1.2286	18,950	\$	1.281			33,674 \$	31,977		897 \$	21,472
Program Amount		\$		\$ 2,6							1,892,097	\$ 2,844,793	\$	3,057,359	\$ 2.	965,572 \$	1,2548 1,791,292	\$ 1.8	4,548	1.30 \$ 3,150,74	3 \$	1.3334 3,382,585 \$	1.3596	\$ 1.972.	923 \$:	1.4121 2.284.184
																							-,			-1-211121

Site Cost Over Time

Folder: Parker Landfill Project Name: Parker Landfill Project ID: Parker Landfill Site Name: Alternative 1 Site Type: Groundwater

Year			17		18		19	20		21	-	22	23		24	1	25	26		27		28	2	9	30	31	
Calendar Year		j	2020		2021	2	2022	2023		2024	2	025	2026		2027		2028	2029		2030	ł	2031	20	32	2033	2034	İ
Phase Element	Phase Element Name	<u> </u>		<u> </u>					<u>i</u>					<u>i</u>					<u> </u>								Total
Studies	Pre-Design Investigation	<u> </u>		ļ							<u> </u>																\$ 385,
Remedial Design	Design	1		<u> </u>	<u> </u>	<u>!</u>			<u>!</u> _		:								i						ŀ		\$ 1,252,
Remedial Action	Advanced Oxidation Processes					<u> </u>															1						\$ 304,
Remedial Action	Carbon Adsorption (Gas)			<u> </u>							<u>Ĺ</u>										1				- T		\$ 27,
Remedial Action	Carbon Adsorption (Liquid)								i							İ	1							- 1			\$ 53,
Remedial Action	Coagulation/Flocculation	ļ				<u>. </u>	İ																				\$ 4.
Remedial Action	Discharge to POTW															Ϊ					1			i			\$ 30,
Remedial Action	Groundwater Monitoring Well																				1						\$ 78,
Remedial Action	Groundwater Extraction Wells				:	:															•			i			\$ 106
Remedial Action	Media Filtration	<u> </u>				· -						- 1				ĺ								İ			\$ 73,
Remedial Action	Miscellaneous Field Installation	⊥.		!										- !		T	1										\$ 63,
Remedial Action	Metals Precipitation													-		j i					-						\$ 122.
Remedial Action	Metals Precipitation	1				İ													1					!			\$ 154,
Remedial Action	Overhead Electrical Distribution	į.				i										İ	i					İ					\$ 15,
Remedial Action	Off-site Transportation and Waste	£\$	152,700	\$	152,699	\$	152,699	\$ 152,69	9 ; \$	152,699	\$	152,699	\$ 152,	699 \$	152,699	\$	152,699 \$	152,6	99 \$	152,699	\$	152,699	\$ 16	52,699 \$	152,699		\$ 4,580,
Remedial Action	Professional Labor Management			i					T		i					!											\$ 3,291,
Remedial Action	ION EXCHANGE								1					1					- :		İ						\$ 641.
Remedial Action	Residual Waste Management	:									-					:											\$ 4
Long Term Monitoring	GW Monitoring	\$	120,247	\$	120,247	\$	120,247	\$ 120,24	7 \$	120,247	\$	120,247	\$ 120,	247 \$	120,247	\$	120,247 \$	114,5	85 ; \$	111,758	\$	111,758	\$ 11	11,758 \$	111,758 \$	37,215	
Long Term Monitoring	5 YR Review Year 05																				— ····						\$ 32,
Long Term Monitoring	5 YR Review Year 10	ļ									-										İ	•		· · · · · · · · · · · · · · · · · · ·			\$ 32,
Long Term Monitoring	5 YR Review Year 15										i					:									i		\$ 32,
Long Term Monitoring	5 YR Review Year 20						i		\$	32,680									Ť		1			<u> </u>			\$ 32.
Long Term Monitoring	5 YR Review Year 25	T .					i									i	\$	32,€	80		†" ~~						\$ 32,
Long Term Monitoring	5 YR Review Year 30	T														i								<u> </u>	s	32,680	
O&M	Miscellaneous Support Costs	\$	871,501	\$	984,128	\$	871,501				\$ 8	871,501	\$ 984,	128 \$	871,501		\$	139,4	25 \$	871,501	\$	984,128	\$ 87	71,501		,	\$ 17,705,
O&M	Groundwater Extraction Wells	\$	16,112	\$	16,112	\$	16,112	\$ 16,11	2 \$	16,112	\$	16,112	\$ 16,	112 \$	16,112	\$	16,112 \$	16.1	12 \$	16,112	\$	16,112		16,112 \$	16,112 \$	6,713	
O&M	Media Filtration	\$	30,768	\$	30,768	\$	30,768	\$ 30,76	в \$	30,768	\$	30,768	\$ 30,	768 \$	30,768	\$	30,768 \$	30,7		30,768	 -	30,768		30,768 \$	30,768 \$	12,820	4
O&M	Carbon Adsorption (Liquid)	\$	32,640	\$	32,597	\$	32,559	\$ 32,52	5 \$	32,494	8	32,467		442 \$		\$	32,398 \$		79 \$	32,361	<u></u>	32,345		32,330 \$	32,316 \$	13,462	1
O&M	Coagulation/Flocculation	\$	58,157	\$	58,157	\$	58,157			58,157	\$		\$ 58,			<u> </u>	58,157 \$		57 \$	58,157				8,157 \$	58,157 \$		\$ 1,744.
M&O	Metals Precipitation	\$	27,186	\$	27,055	\$	26,939	26,83	5 [;] \$	26,742				582 \$		s	26,449 \$	26,3		26,337				26,242 \$	26,199 \$	10,909	
O&M	Metals Precipitation	\$	124,277	: \$	124,182	\$	124,098	124,02	3 \$	123,955		-		839 \$		s	123,743 S		00 \$	123,662	S			23,592 \$	123,561 \$		\$ 3,810,
O&M	Advanced Oxidation Processes	\$	654,703	\$	654,703	\$ 1	654,703	654,70	3 \$	654,703	\$ 6	654,703		703 \$		s	654.703 S		03 \$	654,703	\$			4.703 \$	654,703 \$		\$ 19,641,0
	Carbon Adsorption (Gas)	\$	35,979	\$	35,931	\$	35,889			35,817	_			759 \$			35,711 S		89 \$	35,670	8			35,635 \$	35,619 \$		\$ 1,120,
O&M	Discharge to POTW	\$	6,252	\$	6.252	\$	6,252		-	6,252				252 \$	- ·- · <u> · · · · · · · · · · · · · · </u>	-	6,252 \$		52 \$	6,252	4	-		6,252 \$	6,252 \$	2,605	1
Site Close-out	Site Closeout					 -			Ť			4,242	- "		0,202	. •	0,202 Q	U,E		0,202	+	0,232		0,202	0,202 \$	201,936	
Current Work Estimate (C	(WE)	\$	2,130,522	\$ 2	,242,831	\$ 2,	129,924	1,258,17	2 \$	1,290,626	\$ 2.	129.246	\$ 2.241.	688 \$	2.128.894	\$ 1	1.257 239 \$	1 423 5	40 \$	2 119 980	8 2	232 487	\$ 211	19 749 i \$	1,248,144 \$		\$ 62,878.
Super. & Admin. (S&A)	8.00%	\$	170,442		179,426		170,394	100,65	4 \$	103,250	\$	170,340	\$ 179,	335 \$	170,312		100,579 \$	113,8		169,598	\$			9 580 \$	99,852 \$	54,535	
Super. & Review (S&R) Eng. Des./Const.	3.50% 1.50%	\$	74,568 31,958	\$	78,499 33,642	\$	74,547			45,172		74,524		459 \$			44,003 \$		24 \$	74,199		78,137		4,191 \$	43,685 \$	23,859	
Escalation Factor	1.00,0	φ.	1,4383	Ψ	1.4645	*	1.4907	18,87 1,516		19,359 1,5431	ð	1.5694		625 \$	31,933 1.6218	\$	18,859 \$ 1.648	21,3 1.6	53 \$	31,800 1,7004	\$	33,487 1.7267		1,796 \$ 1,7529	18,722 \$ 1,7791	10,225 1.8053	
Program Amount		\$	3,462,693	\$ 3		\$ 3.5					4 27	776 AEA	£ 4041	700	1.02.10	-	1.040	1,0		1.7004	١.				2,509,247 \$		

Site Cost Summary Report (with Markups)

(Modified)

Folder: Parker Landfill R05

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

Labor 0.7743 (Modified)

Equipment 1.0881 (Modified)

Category: Groundwater Remediation

Label48

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

<u>Phase</u>	Direct Cost	<u>Markups</u>	Total Cost
Studies	\$128,763	\$256,718	\$385,481
Remedial Design	\$775,425	\$476,822	\$1,252,247
Remedial Action (Capital)	\$5,915,109	\$3,637,303	\$9,552,412
Operations & Maintenance	\$33,273,714	\$14,289,099	\$47,562,813
Operations & Maintenance	\$0	\$0	\$0
Long Term Monitoring	\$2,291,281	\$1,632,583	\$3,923,864
Site Close-out	\$75,135	\$126,801	\$201,936
Total Site Cost	\$42,459,427	\$20,419,327	\$62,878,754
		Escalation	\$20,994,398
	Esc	calated Site Cost	\$83,873,152

Cost Database Date: 2003

Cost Type: User-Defined

Site Cost Detail Report (with Markups)

Folder: Parker Landfill R05

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers:

Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Prime

i ilase Liellielli		General		Sub	Markup	Prime		Owner	Markup	
(Markup Template)	Direct Cost	Conditions	Overhead	Profit	on Sub	Profit	Risk	Cost	Total	Total
5 YR Review Year 05	\$11,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
5 YR Review Year 10	\$11,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
5 YR Review Year 15	\$11,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		. ,

Cost Database Date: 2003

Phase Flement

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:26 AM

Page: 1 of 3

Site Cost Detail Report (with Markups)

_			
Р	rı	m	6

Di	General		Sub	B. B. and and an area	D		_		
Direct Cost	Conditions	Overhead	Profit	Markup on Sub	Prime Profit	Risk	Owner Cost	Markup Total	Total
\$11,310	\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504	\$21,370	\$32,680
\$11,310	, \$1,525	\$15,085	\$ 0	\$0				\$21,370	\$32,680
\$11 ,310	. 41,020	Ψ10,500	ΨΟ	ΨΟ	Ψ2,330	ΨΟ	φ1,304	\$21,370	\$32,680
	\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
\$2,223,421	\$175,587	\$873,131	\$0	\$0	\$278,132	\$0	\$177,514	\$1,504,363	\$3,727,784
\$0								\$0	\$0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0		·
\$33,273,714	\$1,686,148	\$6.810.907	\$0	\$0	\$3.535.539	\$0	\$2 256 506	\$14,289,099	\$47,562,813
\$128,763		, ,	*-	7-	70,000,000	**	41,2 00,000	\$256,718	\$385,481
	\$6,467	\$203,134	\$0	\$0	\$28,761	\$0	\$18,356	,	,
\$5,915,109	\$305,506	\$2,164,210	\$0	\$0	\$712,710	\$0	\$454,877	\$3,637,303	\$9,552,412
\$775,425								\$476,822	\$1,252,247
\$75,135	\$4,813	\$98,701	\$0	\$0	\$14,215	\$0	\$9,072	\$126,801	\$201,936
	\$11,310 \$11,310 \$11,310 \$2,223,421 \$0 \$33,273,714 \$128,763 \$5,915,109 \$775,425	\$11,310 \$1,525 \$11,310 \$1,525 \$11,310 \$1,525 \$2,223,421 \$175,587 \$0 \$0 \$33,273,714 \$1,686,148 \$128,763 \$6,467 \$5,915,109 \$305,506 \$775,425	\$1,525 \$15,985 \$11,310 \$1,525 \$15,985 \$11,310 \$1,525 \$15,985 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$0 \$33,273,714 \$1,686,148 \$6,810,907 \$128,763 \$6,467 \$203,134 \$5,915,109 \$305,506 \$2,164,210 \$775,425	\$11,310 \$1,525 \$15,985 \$0 \$11,310 \$1,525 \$15,985 \$0 \$11,310 \$1,525 \$15,985 \$0 \$11,310 \$1,525 \$15,985 \$0 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$128,763 \$6,467 \$203,134 \$0 \$5,915,109 \$305,506 \$2,164,210 \$0 \$775,425	\$11,310 \$1,525 \$15,985 \$0 \$0 \$11,310 \$1,525 \$15,985 \$0 \$0 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$128,763 \$6,467 \$203,134 \$0 \$0 \$0 \$5,915,109 \$305,506 \$2,164,210 \$0 \$0 \$775,425	\$11,310 \$11,525 \$15,985 \$0 \$0 \$2,356 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$33,273,714 \$1,686,148 \$6,810,907 \$0 \$0 \$128,763 \$128,763 \$6,467 \$203,134 \$0 \$0 \$0 \$0 \$712,710 \$775,425	\$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$0 \$111,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$0 \$111,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$0 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$278,132 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$333,273,714 \$1,686,148 \$6,810,907 \$0 \$0 \$3,535,539 \$0 \$128,763 \$6,467 \$203,134 \$0 \$0 \$0 \$28,761 \$0 \$5,915,109 \$305,506 \$2,164,210 \$0 \$0 \$712,710 \$0 \$775,425	\$11,310 \$11,525 \$15,985 \$0 \$0 \$2,356 \$0 \$1,504 \$11,310 \$11,525 \$15,985 \$0 \$0 \$2,356 \$0 \$1,504 \$11,310 \$1,525 \$15,985 \$0 \$0 \$2,356 \$0 \$1,504 \$11,310 \$1,525 \$15,985 \$0 \$0 \$0 \$2,356 \$0 \$1,504 \$2,223,421 \$175,587 \$873,131 \$0 \$0 \$278,132 \$0 \$177,514 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$33,273,714 \$1,686,148 \$6,810,907 \$0 \$0 \$3,535,539 \$0 \$2,256,506 \$128,763 \$6,467 \$203,134 \$0 \$0 \$28,761 \$0 \$18,356 \$5,915,109 \$305,506 \$2,164,210 \$0 \$0 \$712,710 \$0 \$454,877 \$775,425	\$11,310

Cost Database Date: 2003

Phase Element

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:26 AM

Page: 2 of 3

Site Cost Detail Report (with Markups)

Prime

Phase Element					rinne					
(Markup Template)	Direct Cost	General Conditions		Sub Profit	Markup on Sub	Prime Profit	Risk	Owner Cost	Markup Total	Total
Total Site Cost	\$42,459,427	\$2,187,669	\$10,245,992	\$0	\$0	\$4,583,495	\$0	\$2,925,348	\$20,419,327	\$62,878,754
							Escalation	on		\$20,994,398
						Escalate	ed Site Co	st		\$83,873,152

Cost Database Date: 2003
Cost Type: User-Defined

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743 (Modified) **Equipment** 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Pre-Design Investigation Media/Waste Type: Groundwater

Type: Studies Secondary Media/Waste Type: N/A

Labor Rate Group: System Labor Rate Contaminant: Volatile Organic Compounds

(VOCs)

Page: 1 of 3

Analysis Rate Group: System Analysis Rate Secondary Contaminant: None

Approach: None Markup Template: System Defaults

Start Date: 2/1/2004 O&M Markup Template: N/A

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:29:26 PM

Technology: Remedial Investigation

Element: Scoping

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010104	Car or Van Mileage Charge	20.00	Mi	0.34	0.00	0.00	\$6.87	
33220102	Project Manager	100.00	HR	0.00	37.28	0.00	\$3,727.98	
33220105	Project Engineer	400.00	HR	0.00	27.60	0.00	\$11,040.12	
33220106	Staff Engineer	400.00	HR	0.00	21.99	0.00	\$8,797.12	
33220108	Project Scientist	300.00	HR	0.00	22.44	0.00	\$6,731.94	
33220109	Staff Scientist	500.00	HR	0.00	21.42	0.00	\$10,709.70	
33220110	QA/QC Officer	50.00	HR	0.00	48.79	0.00	\$2,439.32	
33220111	Certified Industrial Hygienist	50.00	HR	0.00	41.88	0.00	\$2,093.83	
33220114	Word Processing/Clerical	58.00	HR	0.00	12.41	0.00	\$719.80	
33220115	Draftsman/CADD	50.00	HR	0.00	19.23	0.00	\$961.64	
33240101	Other Direct Costs	1.00	LS	285.91	0.00	0.00	\$285.91	
			Total	Element Cost			\$47,514.23	

Element: Site Characterization

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33010104 33220102	Car or Van Mileage Charge Project Manager	40.00 107.00	Measure MI HR	Unit Cost 0.34 0.00	Unit Cost 0.00 37.28	Unit Cost 0.00 0.00	Cost \$13.75 \$3,988.94	Override

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:29:26 PM

Page: 2 of 3

Element: Site Characterization

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Accombiy	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220103	Office Manager	43.00	HR	0.00	53.05	0.00	\$2,281.27	
33220105	Project Engineer	66.00	HR	0.00	27.60	0.00	\$1,821.62	
33220106	Staff Engineer	500.00	HR	0.00	21.99	0.00	\$10,996.40	
33220108	Project Scientist	237.00	HR	0.00	22.44	0.00	\$5,318.23	
33220109	Staff Scientist	1,798.00	HR	0.00	21.42	0.00	\$38,512.08	
33220110	QA/QC Officer	86.00	HR	0.00	48.79	0.00	\$4,195.63	
33220111	Certified Industrial Hygienist	51.00	HR	0.00	41.88	0.00	\$2,135.71	
33220112	Field Technician	201.00	HR	0.00	14.98	0.00	\$3,010.20	
33220114	Word Processing/Clerical	288.00	HR	0.00	12.41	0.00	\$3,574.20	
33220115	Draftsman/CADD	198.00	HR	0.00	19.23	0.00	\$3,808.07	
33240101	Other Direct Costs	1.00	LS	1,593.12	0.00	0.00	\$1,593.12	
			Total	Element Cost			\$81,249.22	
		Total 1st Year Technology Cost					\$128,763.45	
		Total Phase Element Cost					\$128,763.45	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:29:26 PM

Phase Element Cost Summary Report (with Markups)

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1

ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Design

Type: Remedial Design

Start Date: 2/1/2004

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:30:00 PM

Page: 1 of 2

Phase Element Cost Summary Report (with Markups)

Phase Name	Phase	Approach	Capital Costs	Design %	RD Cost
Pump and Treat	Remedial Action	None	\$6,261,236	20%	\$1,252,247
			Total Phase Element Cost		\$1,252,247
			Escalation		\$40,322
		Esc	calated Phase Element Cost		\$1,292,569

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:30:00 PM

Folder: Parker Landfill R05

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)
Labor 0.7743 (Modified)

Labor 0.7743 (Modified) **Equipment** 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1

ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Pump and Treat Media/Waste Type: Groundwater

Type: Remedial Action Secondary Media/Waste Type: N/A

Labor Rate Group: System Labor Rate Contaminant: Volatile Organic Compounds

(VOCs)

Analysis Rate Group: System Analysis Rate Secondary Contaminant: None

Approach: Ex Situ Markup Template: System Defaults

Start Date: 2/1/2004 O&M Markup Template: N/A

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 1 of 21

Technology: Groundwater Extraction Wells

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Qualitity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
17020203	Demolish Bituminous Pavement with Air Equipment	0.60	CY	0.00	22.98	7.88	\$18.52	Override
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	633.79	3,500.00	\$4,133.79	
33020303	Organic Vapor Analyzer Rental, per Day	9.00	DAY	110.11	0.00	0.00	\$990.99	
33109660	5,000 Gallon Single-wall Steel Aboveground Tank	1.00	EA	4,200.42	973.18	195.21	\$5,368.81	
33170808	Decontaminate Rig, Augers, Screen (Rental Equipment)	8.00	DAY	104.11	0.00	0.00	\$832.88	
33220112	Field Technician	36.00	HR	0.00	14.98	0.00	\$539.14	
33230103	6" PVC, Schedule 40, Well Casing	500.00	LF	3.82	3.04	10.71	\$8,787.70	
33230157	2" Pitless Adapter	3.00	EA	179.89	0.00	16.80	\$590.07	
33230203	6" PVC, Schedule 40, Well Screen	55.00	LF	8.70	5.07	17.85	\$1,739.24	
33230303	6" PVC, Well Plug	3.00	EA	58.56	7.92	27.90	\$283.15	
33230550	4" Submersible Pump, 33-55 GPM, 161'< Head <=220', 3 hp, w/ controls	3.00	EA	3,111.17	0.00	0.00	\$9,333.51	
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	550.00	LF	0.00	14.48	51.00	\$36,017.14	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 2 of 21

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	2000pt.011	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33231172	Split Spoon Sample, 2" x 24", During Drilling	34.00	EA	39.78	0.00	0.00	\$1,352.51	Ovomido
33231182	Furnish 55 Gallon Drum for Drill Cuttings & Development Water	18.00	EA	72.51	0.00	0.00	\$1,305.13	
33231186	Well Development Equipment Rental (weekly)	3.00	WK	219.02	0.00	0.00	\$657.07	
33231403	6" Screen, Filter Pack	55.00	LF	7.28	4.60	16.18	\$1,542.84	
33231813	6" Well, Portland Cement Grout	155.00	LF	9.00	0.00	0.00	\$1,395.11	
33232103	6" Well, Bentonite Seal	3.00	EA	33.80	28.52	100.43	\$488.27	
33232206	Restricted Area, Well Protection (with 4 Posts & Explosionproof Receptacle)	3.00	EA	518.55	237.89	1.81	\$2,274.75	
33260202	2" Stainless Steel Piping, Schedule 40, Threaded	55.00	LF	16.20	7.72	0.00	\$1,315.31	
			Total	Element Cost			\$78,965.93	
		Total 1st Year Technology Cost					\$78,965.93	

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Media Filtration

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
-	•	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020324	12" Structural Slab on Grade	200.00	SF	4.97	2.49	0.45	\$1,581.90	
33130104	6' Diameter Electric Automatic	2.00	EA	12,695.27	2,500.82	1,412.67	\$33,217.52	
	Pressure Filter Unit			,	•	,		
33260203	3" Stainless Steel Piping,	200.00	LF	33.61	11.57	0.00	\$9,036.40	
	Schedule 40, Threaded						*-,	
33310401	Heat Exchanger, 8 GPM,	1.00	EA	11.330.91	119.61	0.00	\$11,450.52	
	Purchase and Installation			,			****,	
			\$55,286.34					
		Total 1st Year Technology Cost						
		10	\$55,286.34					

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Carbon Adsorption (Liquid)

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
,	·	Quartity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020322	8" Structural Slab on Grade	65.00	SF	3.74	2.23	0.41	\$414.98	
33132025	200 GPM, 6,000 Lb Fill, High-density Polyethylene-lined	2.00	EA	16,001.60	888.75	357.88	\$34,496.44	
33290124	Steel, Permanent 150 GPM, 5 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	4,112.90	1,639.35	0.00	\$5,752.25	
			Total	Element Cost			\$40,663.67	
		Total 1st Year Technology Cost					\$40,663.67	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 5 of 21

Technology: Overhead Electrical Distribution

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
20020301	1/0 ACSR Conductor	636.00	LF	0.21	0.44	0.06	\$451.43	
20020310	1/C #2 Aluminum, Bare, Wire	282.00	LF	0.16	0.43	0.06	\$180.99	
20020402	35' Class 3 Treated Power Pole	2.00	EA	284.26	227.56	44.89	\$1,113.43	
20020430	Terminal Structure, 5 KV Pole Top	2.00	EA	1,188.65	855.93	168.84	\$4,426.83	
20020511	5 KV, 3/0, Shielded Cable, Copper	105.00	LF	2.58	1.10	0.22	\$409.56	
20020545	5 KV, 1/0 to 4/0 Conductor, Terminations & Splicing	6.00	EA	458.79	170.87	0.00	\$3,777.97	
20039902	4" Rigid Steel Conduit	35.00	LF	9.09	6.89	0.00	\$559.20	
		Total Element Cost \$10,9						
		Total 1st Year Technology Cost						

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Residual Waste Management

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
-	•	,	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33190103	Load Drums on Disposal Vehicle	70.00	EA	0.00	1.46	1.64	\$216.98	
33190204	Transport 55 Gallon Drums of Hazardous Waste, Max 80 drums (per Mile)	150.00	MI	1.58	0.00	0.00	\$237.03	
33190205	Transport Bulk Solid Hazardous Waste, Maximum 20 CY (per Mile)	150.00	MI	1.52	0.00	0.00	\$228.03	
33190317	Waste Stream Evaluation Fee, Not Including 50% Rebate on 1st Shipment	2.00	EA	435.04	0.00	0.00	\$870.09	
33190350	State Disposal Tax (Non-Hazardous, Non-leaking Drums)	70.00	EA	5.00	0.00	0.00	\$350.00	
33190352	State Disposal Tax (Non-Hazardous Bulk Solid)	2.00	CY	5.00	0.00	0.00	\$10.00	
33197205	Landfill Nonhazardous Solid Waste, 55 Gallon Drum	70.00	EA	13.50	0.00	0.00	\$945.00	
33197270	Landfill Nonhazardous Solid Bulk Waste by CY	2.00	CY	131.30	0.00	0.00	\$262.60	
		Total Element Cost					\$3,119.73	
		То	tal 1st Year T	echnology Cos	st		\$3,119.73	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 7 of 21

Technology: Professional Labor Management

Element: Professional Labor Percentage

	_		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity					_	_
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220138	Project Management Labor Cost	1.00	LS	0.00	241,247.97	0.00	\$241,247.97	
33220139	Planning Documents Labor Cost	1.00	LS	0.00	241,247.97	0.00	\$241,247.97	
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	301,559.97	0.00	\$301,559.97	
33220141	Reporting Labor Cost	1.00	LS	0.00	30,156.00	0.00	\$30,156.00	
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	30,156.00	0.00	\$30,156.00	
33220143	Public Notice Labor Cost	1.00	LS	0.00	4,221.84	0.00	\$4,221.84	
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220145	Permitting Labor Cost	1.00	LS	0.00	241,559.97	0.00	\$241,559.97	
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
			Total	Element Cost			\$1,090,149.71	

Total 1st Year Technology Cost

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

\$1,090,149.71

Technology: Groundwater Monitoring Well

Element: Aquifer 1

A	D 1.0		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	5.5	11.11.6				
33020303	Organia Vanar Analyzar Bantal	40.00	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33020303	Organic Vapor Analyzer Rental, per Day	13.00	DAY	110.11	0.00	0.00	\$1,431.44	
33170808	Decontaminate Rig, Augers,	13.00	DAY	104.11	0.00	0.00	\$1,353.44	
22220440	Screen (Rental Equipment)	222.55						
33220112	Field Technician	208.00	HR	0.00	14.98	0.00	\$3,115.03	
33230101	2" PVC, Schedule 40, Well Casing	900.00	LF	1.10	2.11	7.44	\$9,583.02	
33230201	2" PVC, Schedule 40, Well Screen	100.00	LF	2.53	2.73	9.60	\$1,485.19	
33230301	2" PVC, Well Plug	10.00	EA	5.33	3.17	11.16	\$196.57	
33231101	Hollow Stem Auger, 8" Dia Borehole, Depth <= 100 ft	1,010.00	LF	0.00	5.79	20.40	\$26,456.24	
33231182	Furnish 55 Gallon Drum for Drill Cuttings & Development Water	53.00	EA	72.51	0.00	0.00	\$3,842.89	
33231401	2" Screen, Filter Pack	120.00	LF	2.84	1.80	6.32	\$1,315.51	
33231811	2" Well, Portland Cement Grout	870.00	LF	1.06	0.00	0.00	\$921.24	
33232101	2" Well, Bentonite Seal	10.00	EA	8.45	7.13	25.11	\$406.89	
			Total	Element Cost			\$50,107.46	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 9 of 21

Element: General Aquifers

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	Measure LS	Unit Cost 0.00	Unit Cost 633.79	Unit Cost 2,231.86	Cost \$2,865.66	Override
33231504	Surface Pad, Concrete, 2' x 2' x 4"	10.00	EA	37.02	66.05	4.21	\$1,072.83	
			Total	Element Cost			\$3,938.48	
		То	tal 1st Year T	echnology Cos	st		\$54,045.94	

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Coagulation/Flocculation

Element: N/A

Accombly	Description	O	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020324	12" Structural Slab on Grade	260.00	SF	4.97	2.49	0.45	\$2,056.47	
19010206	3", Class 200, PVC Piping	200.00	LF	0.87	4.20	0.43	\$1,100.94	
			Total	Element Cost			\$3,157.41	
		То	\$3,157.41					

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Metals Precipitation

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
, 1000mbry	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020322	8" Structural Slab on Grade	600.00	SF	3.74	2.23	0.41	\$3,830.58	0.07.1.00
33021514	pH/ORP Output Card Dual Propor Alarm	1.00	EA	94.51	22.43	0.00	\$116.93	
33021515	pH/ORP Input Card Isolated 0/4-20 mA	1.00	EA	149.35	22.43	0.00	\$171.77	
33021518	pH Controller with Isolated 4-20 mA Output	1.00	EA	1,254.27	22.43	0.00	\$1,276.70	
33021519	pH Pump Pulser Board for Controller	1.00	EA	252.02	22.43	0.00	\$274.45	
33021520	Analog pH Analyzer with 2 - 12 pH Dials	2.00	EA	674.39	11.21	0.00	\$1,371.20	
33021523	pH Coax Cable (12')	2.00	EA	103.99	11.21	0.00	\$230.41	
33021524	Submersion Assembly	2.00	EA	227.52	11.21	0.00	\$477.46	
33120606	Pumping System	1.00	EΑ	1,925.19	0.00	0.00	\$1,925.19	
33120610	70 GPM Continuous Neutralization System	1.00	EA	80,160.43	0.00	0.00	\$80,160.43	
33260302	2" Polypropylene Pipe Including Fittings	50.00	LF	1.28	2.98	0.00	\$213.17	
33290122	75 GPM, 3 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	3,602.87	1,012.46	0.00	\$4,615.33	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 12 of 21

Total Element Cost

\$94,663.63

Total 1st Year Technology Cost

\$94,663.63

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 13 of 21

Technology: Metals Precipitation

Element: N/A

	-		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021524	Submersion Assembly	2.00	EA	227.52	11.21	0.00	\$477.46	
33120606	Pumping System	1.00	EA	1,925.19	0.00	0.00	\$1,925.19	
33120610	70 GPM Continuous Neutralization System	1.00	EA	80,160.43	0.00	0.00	\$80,160.43	
33260302	2 ⁿ Polypropylene Pipe Including Fittings	50.00	LF	1.28	2.98	0.00	\$213.17	
33290122	75 GPM, 3 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	3,602.87	1,012.46	0.00	\$4,615.33	
33333011	2 CF Filter Press system w/sludge tanks,pumps,mixers,sludge cart	1.00	EA	32,458.37	0.00	0.00	\$32,458.37	
			Total	Element Cost			\$119,849.96	
		То	tal 1st Year T	echnology Cos	st		\$119,849.96	

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Advanced Oxidation Processes

Element: N/A

Accombly	Description	0 "	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cont	Override
18020321	6" Structural Slab on Grade	1,500.00	SF	2.53	1.75	0.19	Cost \$6,700.80	Override
19040438	2,600 Gallon Conical Bottom Vertical XLPE Tank	1.00	EA	3,703.84	94.81	11.18	\$3,809.84	
19040445	2,600 Gallon Conical Tank Stand	1.00	EA	2,045.66	0.00	0.00	\$2,045.66	
33120803	Peroxide System Mob/Assembly/Shakedown	1.00	EA	9,707.46	0.00	0.00	\$9,707.46	
33120805	Operator Health and Safety Course	1.00	EA	408.37	965.21	0.00	\$1,373.58	
33120820	70 KW High Intensity Ultraviolet, H2O2 Capital Equipment	1.00	EA	137,911.25	8,738.00	17,909.61	\$164,558.87	
33120848	Fugitive Emission Control System	1.00	EA	23,335.24	1,434.92	2,941.04	\$27,711.19	
33130116	0 - 50 GPM Cartridge Filter Equipment	3.00	EA	2,209.33	41.03	0.00	\$6,751.07	
33260203	3" Stainless Steel Piping, Schedule 40, Threaded	100.00	LF	33.61	11.57	0.00	\$4,518.20	
33290124	150 GPM, 5 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	4,112.90	1,639.35	0.00	\$5,752.25	
			Tota	l Element Cost			\$232,928.92	
		Total 1st Year Technology Cost					\$232,928.92	

Cost Database Date: 2003

Cost Type: User-Defined

Technology: ION EXCHANGE

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021511	Water Flowmeter	6.00	EA	75.01	0.00	0.00	\$450.05	Overmue
33021512	pH Chemical Feed Controller without Input Card	1.00	EA	810.90	0.00	0.00	\$810.90	
33021514	pH/ORP Output Card Dual Propor Alarm	1.00	EA	94.51	22.43	0.00	\$116.93	
33021519	pH Pump Pulser Board for Controller	1.00	EA	252.02	22.43	0.00	\$274.45	
33021520	Analog pH Analyzer with 2 - 12 pH Dials	1.00	EA	674.39	11.21	0.00	\$685.60	
33021521	pH Coax Cable (4')	1.00	EA	66.74	11.21	0.00	\$77.95	
33109650	Control Panel, 1 - 8 Single-wall Tanks, Monitoring System	1.00	EA	2,225.22	0.00	0.00	\$2,225.22	
33109724	30,000 Gallon Double-walled Storage Tank, Leak Detection Sensor	2.00	EA	4,355.70	0.00	0.00	\$8,711.39	
33130416	1/3 HP, Single Propeller 4" Diameter Mixer	1.00	EA	1,516.79	44.56	0.00	\$1,561.35	
33290124	150 GPM, 5 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	4,112.90	1,639.35	0.00	\$5,752.25	
33310206	30 HP, 240 Gallon, 200 PSI, 143 SCFM, Air Compressor	1.00	EA	12,477.63	1,128.79	0.00	\$13,606.42	

Cost Database Date: 2003 Cost Type: User-Defined

Element: N/A

Assembly	Description		Unit of	Material	Labor	Equipment	Extended	Cost
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33330102	Sodium Hydroxide Solution, 700 Lb Drummed Liquid	50.00	EA	133.01	5.72	3.77	\$7,125.21	
33430201	Miscellaneous Minor Field Installation	1.00	LS	0.00	0.00	452,000.00	\$452,000.00	
			Total Element Cost					
		То	\$493,397.72					

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Carbon Adsorption (Gas)

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
-	•	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020322	8" Structural Slab on Grade	60.00	SF	3.74	2.23	0.41	\$383.06	
33021501	Saturation Indicator	1.00	EA	45.00	0.00	0.00	\$45.00	
33021506	Monitoring Port with Gas Monitor	2.00	EA	1.03	11.57	0.00	\$25.22	
33131981	Dual Bed,1000 CFM Series/2000 CFM Parallel,2000 Lb Fill each	1.00	EA	20,646.45	0.00	0.00	\$20,646.45	
33310209	Pressure Gauge	2.00	EA	64.22	33.64	0.00	\$195.71	
			Total	Element Cost			\$21,295.44	
		То	tal 1st Year T		\$21,295,44			

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Discharge to POTW

Element: N/A

Accombly	Description	O	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
17010107	Medium Brush, Medium Trees, Clear, Grub, Haul	1.00	ACRE	0.00	3,000.24	3,220.75	\$6,220.99	Overnide
17030259	Cat 225, 1.5 CY, Soil/Sand, Trenching	278.00	CY	0.00	0.33	0.59	\$255.01	
17030260	Cat 225, 1.5 CY, Soil/Sand, 10' - 20' Deep Trench Box, Trench	278.00	CY	0.97	1.09	1.96	\$1,116.14	
17030272	Pull Trench Box, Cat 225, 1.5 CY, Soil/Sand, Trenching	278.00	CY	0.48	1.09	1.96	\$981.51	
17030401	950, 3.00 CY, Backfill with Excavated Material	270.00	CY	0.00	0.41	0.73	\$309.39	
17031001	Wellpoint for Trench, Install & Remove <500', 1 Month	5.00	LFHD	60.94	0.00	0.00	\$304.72	
18050402	Seeding, Vegetative Cover	1.00	ACRE	3,408.77	61.45	59.23	\$3,529.44	
19020126	6" PVC Pipe Sanitary	1,000.00	LF	2.48	3.50	2.05	\$8,021.10	
33197101	Sewer Connection Fee	1.00	EA	1,500.00	0.00	0.00	\$1,500.00	
			Total	Element Cost			\$22,238.30	
	•	To	tal 1st Year T	echnology Cos	st		\$22,238.30	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 19 of 21

Technology: Off-site Transportation and Waste Disposal

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
, toodinibily	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33190101	Liquid Loading Into 5,000 Gallon Bulk Tank Truck	274.00	EA	0.00	212.53	115.34	\$89,835.67	
33190255	Tanker Trailer Transport Hazardous Waste 300 - 399 Miles	82,200.00	М	2.24	0.00	0.00	\$184,144.44	
33197278	Landfill Nonhazardous Nonfuel Liquid/Sludge	1,368,750.00	GAL	2.39	0.00	0.00	\$3,271,312.50	
			\$3,545,292.61					
		То	\$3,545,292.61					

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:46:48 AM

Page: 20 of 21

Technology: Miscellaneous Field Installation

Element: N/A

Assembly 33430201	Description Miscellaneous Minor Field Installation	Quantity 1.00	Unit of	Material	Labor	Equipment	Extended	Cost	
			Measure LS	Unit Cost 49,134.68	Unit Cost 0.00	Unit Cost 0.00	Cost \$49,134.68	Override	
			Total	l Element Cost			\$49,134.68 \$49,134.68		
		То	tal 1st Year 1	Technology Cos	st				
			Tota	l Phase Elemen	\$5.915.109.40				

Cost Database Date: 2003 Cost Type: User-Defined

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743 (Modified)

(Modified) Equipment 1.0881

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1 ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: O&M

Type: Operations & Maintenance

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: Ex Situ

Start Date: 2/1/2004

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults **O&M Markup Template:** System Defaults

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 1 of 9

Technology: Operations and Maintenance (12 - months only)

Element: Miscellaneous

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010202	Per Diem (per person)	72.00	DAY	109.80	0.00	0.00	\$7,905.60	
33010206	Mobilize Crew, Local, per Person	365.00	EA	22.83	0.00	0.00	\$8,332.15	
33010423	Disposable Gloves (Latex)	1,204.00	PAIR	0.21	0.00	0.00	\$246.82	
33010425	Disposable Coveralls (Tyvek)	1,204.00	EA	4.36	0.00	0.00	\$5,251.49	
33190340	Non Haz Drummed Site Waste - Load, Transp, & Landfill Disp (55-Gal Drums)	31.00	EA	200.48	0.00	0.00	\$6,214.99	
33199921	DOT Steel Drum, 55 Gallon	31.00	EA	72.51	0.00	0.00	\$2,247.73	
33220104	Senior Staff Engineer	81.00	HR	0.00	37.21	0.00	\$3,014.16	
33220112	Field Technician	365.00	HR	0.00	14.98	0.00	\$5,466.28	
33240104	Startup Costs	1.00	LS	56,132.04	56,132.04	28,066.02	\$140,330.11	
33420101	Electrical Charge	9,883,582.00	KWH	0.07	0.00	0.00	\$644,409.55	
99999001	Other	1.00	LS	300,000.00	0.00	0.00	\$300,000.00	
			Tota	l Element Cost			\$1,123,418.86	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 2 of 9

Element: Groundwater Extraction Wells

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220106	Staff Engineer	60.00	HR	0.00	21.99	0.00	\$1,319.57	
33220112	Field Technician	195.00	HR	0.00	14.98	0.00	\$2,920.34	
33420101	Electrical Charge	42,364.00	KWH	0.07	0.00	0.00	\$2,762.13	
			Total	Element Cost			\$7,002.04	
Element: M	ledia Filtration							
Assembly	Description	Overatites	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Macaura	Unit Cost	Unit Cost	Unit Cont	C1	Os co suit al a
33220106	Staff Engineer	96.00	Measure			Unit Cost	Cost	Override
	ŭ	86.00	HR	0.00	21.99	0.00	\$1,891.38	
33220112	Field Technician	539.00	HR	0.00	14.98	0.00	\$8,072.12	
33420101	Electrical Charge	15,033.00	KWH	0.07	0.00	0.00	\$980.15	

Element: Carbon Adsorption (Liquid)

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	•	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33132052	Coal-based General Purpose, 8 x 30 Sieve, 900 Iodine, 2,000 - 10,000 Lb	8,000.00	LB	0.94	0.00	0.00	\$7,520.80	

Total Element Cost

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

\$10,943.65

Element: Carbon Adsorption (Liquid)

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33132065	Removal, Transport, Regeneration	8,000.00	LB	0.61	0.00	0.00	\$4,844.80	
	of Spent Carbon, < 2K lb							
33220106	Staff Engineer	96.00	HR	0.00	21.99	0.00	\$2,111.31	
33220112	Field Technician	529.00	HR	0.00	14.98	0.00	\$7,922.36	
33420101	Electrical Charge	21,033.00	KWH	0.07	0.00	0.00	\$1,371.35	
		Total Element Cost					\$23,770.62	

Element: Coagulation/Flocculation

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Cost Override
33220106	Staff Engineer	153.00	HR	0.00	21.99	0.00	\$3,364.90	
33220112	Field Technician	595.00	HR	0.00	14.98	0.00	\$8,910.78	
33330127	Non-ionic Polymeric Flocculant	3,925.00	LB	3.51	0.00	0.00	\$13,784.21	
33420101	Electrical Charge	59,353.00	KWH	0.07	0.00	0.00	\$3,869.82	
		Total Element Cost					\$29,929.70	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Element: Metals Precipitation

Accombly	Decemention	Over metite .	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons), Water Analysis	4.00	EA	130.70	0.00	0.00	\$522.82	
33022132	Purgeable Áromatics (SW 5030B/SW 8021B Aromatics), Water Analysis	4.00	EA	103.85	0.00	0.00	\$415.39	
33220106	Staff Engineer	196.00	HR	0.00	21.99	0.00	\$4,310.59	
33220112	Field Technician	880.00	HR	0.00	14.98	0.00	\$13,178.97	
33330111	Sulfuric Acid Solution, 750 Lb Drummed Liquid	55.00	EA	75.01	5.72	3.77	\$4,647.41	
33330117	Hydrated Lime, Powdered, Bulk	59.00	TON	98.25	0.01	0.01	\$5,797.40	
33420101	Electrical Charge	55,567.00	KWH	0.07	0.00	0.00	\$3,622.97	
			Total	Element Cost		\$32,495.54		

Element: Metals Precipitation

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons), Water Analysis	4.00	Measure EA	Unit Cost 130.70	Unit Cost 0.00	Unit Cost 0.00	Cost \$522.82	Override

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 5 of 9

Element: Metals Precipitation

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022132	Purgeable Aromatics (SW	4.00	EA	103.85	0.00	0.00	\$415.39	
	5030B/SW 8021B Aromatics),							
	Water Analysis							
33220106	Staff Engineer	236.00	HR	0.00	21.99	0.00	\$5,190.30	
33220112	Field Technician	890.00	HR	0.00	14.98	0.00	\$13,328.73	
33330111	Sulfuric Acid Solution, 750 Lb	55.00	EA	75.01	5.72	3.77	\$4,647.41	
	Drummed Liquid							
33330117	Hydrated Lime, Powdered, Bulk	59.00	TON	98.25	0.01	0.01	\$5,797.40	
33333011	2 CF Filter Press system w/sludge	2.00	EA	32,458.37	0.00	0.00	\$64,916.74	
	tanks,pumps,mixers,sludge cart			,			. ,	
33420101	Electrical Charge	70,567.00	KWH	0.07	0.00	0.00	\$4,600.97	
		Total Element Cost					\$99,419.75	

Element: Advanced Oxidation Processes

6 <i>t</i> - t	Para della c	• "	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons), Water Analysis	4.00	EA	130.70	0.00	0.00	\$522.82	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 6 of 9

Element: Advanced Oxidation Processes

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022132	Purgeable Aromatics (SW 5030B/SW 8021B Aromatics), Water Analysis	4.00	EA	103.85	0.00	0.00	\$415.39	Override
33120851	7.5 KW Ultraviolet Source High Intensity Lamp	50.00	EA	175.01	0.00	0.00	\$8,750.71	
33132917	Propane	35,000.00	GAL	1.48	0.00	0.00	\$51,674.00	
33220106	Staff Engineer	224.00	HR	0.00	21.99	0.00	\$4,926.39	
33220112	Field Technician	817.00	HR	0.00	14.98	0.00	\$12,235.47	
33330171	Hydrogen Peroxide, 50% Solution, 500 Lb Drums	445.00	EA	890.09	0.00	0.00	\$396,089.61	
33420101	Electrical Charge	407,902.00	KWH	0.07	0.00	0.00	\$26,595.21	
			Total		\$501,209.59			

Element: Carbon Adsorption (Gas)

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	2000.19.1011	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021803	Tentative ID Compunds, GC/MS, Air (30/5041/8260B - TO-14), Air Analysis	2.00	EA	138.01	0.00	0.00	\$276.03	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 7 of 9

Element: Carbon Adsorption (Gas)

			Unit of	Material	Labor	Equipment	Extended	Cost		
Assembly	Description	Quantity								
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override		
33131942	Coal-based, 4 mm Pellet, for	9,000.00	LB	0.99	0.00	0.00	\$8,910.90			
	Solvent Recovery 2,000 - 10,000									
	Lb									
33132065	Removal, Transport, Regeneration	9,000.00	LB	0.61	0.00	0.00	\$5,450.40			
	of Spent Carbon, < 2K lb									
33220106	Staff Engineer	119.00	HR	0.00	21.99	0.00	\$2,617.14			
33220112	Field Technician	485.00	HR	0.00	14.98	0.00	\$7,263.41			
33420101	Electrical Charge	53,800.00	KWH	0.07	0.00	0.00	\$3,507.76			
			Tatal	Flowert Cont			\$20,005,04			
			Total Element Cost					\$28,025.64		

Element: Discharge to POTW

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Cost Override
33220106	Staff Engineer	16.00	HR	0.00	21.99	0.00	\$351.88	
33220112	Field Technician	80.00	HR	0.00	14.98	0.00	\$1,198.09	
33420101	Electrical Charge	18,033.00	KWH	0.07	0.00	0.00	\$1,175.75	
			Total	Element Cost			\$2,725.72	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Total 1st Year Technology Cost
Runtime Percent Cost Adjustment
O & M Total Cost

Total Phase Element Cost \$1,803,172.89

\$1,858,941.12

\$1,803,172.89

97%

Cost Database Date: 2003
Cost Type: User-Defined

Print Date: 5/19/2004 2:30:48 PM

Page: 9 of 9

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743 (Modified) **Equipment** 1.0881 (Modified)

Category: Groundwater Remediation

_abel45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: GW Monitoring Media/Waste Type: Groundwater

Type: Long Term Monitoring Secondary Media/Waste Type: N/A

Labor Rate Group: System Labor Rate Contaminant: Volatile Organic Compounds

(VOCs)

Analysis Rate Group: System Analysis Rate Secondary Contaminant: None

Approach: None Markup Template: System Defaults

Start Date: 2/1/2004 O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 1 of 8

Description: 10 wells, quarterly for 5 yr, annually for years 6-30 for VOCs; 45 wells semi-annually for 30 yrs for TAL Metals and

VOCs

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 2 of 8

Technology: Monitoring (12 - months only)

Element: Groundwater

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33020401	Disposable Materials per Sample	40.00	EA	7.67	0.00	0.00	\$306.86	
33020402	Decontamination Materials per	40.00	EA	6.90	0.00	0.00	\$276.03	
	Sample						,	
33020561	Nylon Tubing, 1/4" Outside	4,025.00	LF	0.40	0.00	0.00	\$1,610.00	
	Diameter	,					4 1, 6 1 6 1 6	
33021509	Water Quality Parameter Testing	2.00	WK	219.02	0.00	0.00	\$438.04	
	Device			_,,,,,	0.00	0.00	V 10010 1	
33029501	Water Analysis EPA 8260B	40.00	LS	181.50	0.00	0.00	\$7,260.00	
	•							
33230510	4" Submersible Pump Rental,	2.00	WK	220.94	0.00	0.00	\$441.87	
	Week							
33231186	Well Development Equipment	2.00	WK	219.02	0.00	0.00	\$438.04	
	Rental (weekly)			·			*	

Total Element Cost

Element: General Monitoring

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		-	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
	Car or Van Mileage Charge	160.00	MI	0.34	0.00	0.00	\$54.99	
33220108	Project Scientist	140.00	HR	0.00	22.44	0.00	\$3,141.57	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 3 of 8

\$10,770.84

Element: General Monitoring

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	•		Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220112	Field Technician	148.00	HR	0.00	14.98	0.00	\$2,216.46	
33220114	Word Processing/Clerical	20.00	HR	0.00	12.41	0.00	\$248.21	
33220115	Draftsman/CADD	20.00	HR	0.00	19.23	0.00	\$384.65	
			Total	Element Cost			\$6,045.89	
		То	tal 1st Year T	echnology Cos	st		\$16,816.73	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Technology: Monitoring (12 - months only)

Element: Groundwater

	•		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33020401	Disposable Materials per Sample	10.00	EA	7.67	0.00	0.00	\$76.71	
33020402	Decontamination Materials per Sample	10.00	EA	6.90	0.00	0.00	\$69.01	
33020561	Nylon Tubing, 1/4" Outside Diameter	1,025.00	LF	0.40	0.00	0.00	\$410.00	
33021509	Water Quality Parameter Testing Device	1.00	WK	219.02	0.00	0.00	\$219.02	
33029501	Water Analysis EPA 8260B	10.00	LS	181.50	0.00	0.00	\$1,815.00	
33230509	4" Submersible Pump Rental, Day	2.00	DAY	73.65	0.00	0.00	\$147.29	
33231186	Well Development Equipment Rental (weekly)	1.00	WK	219.02	0.00	0.00	\$219.02	

Total Element Cost

\$2,956.06

Element: General Monitoring

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
,		a contracty	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010104	Car or Van Mileage Charge	40.00	Mi	0.34	0.00	0.00	\$13.75	
33220108	Project Scientist	35.00	HR	0.00	22.44	0.00	\$785.39	
33220112	Field Technician	37.00	HR	0.00	14.98	0.00	\$554.12	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 5 of 8

Element: General Monitoring

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220114	Word Processing/Clerical	5.00	HR	0.00	12.41	0.00	\$62.05	
33220115	Draftsman/CADD	5.00	HR	0.00	19.23	0.00	\$96.16	
			Total	Element Cost			\$1,511.47	
		Total 1st Year Technology Cost					\$4,467.53	

Cost Database Date: 2003
Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 6 of 8

Technology: Monitoring (12 - months only)

Element: Groundwater

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33020401	Disposable Materials per Sample	90.00	ĖΑ	7.67	0.00	0.00	\$690.43	
33020402	Decontamination Materials per	90.00	EA	6.90	0.00	0.00	\$621.06	
	Sample							
33020561	Nylon Tubing, 1/4" Outside	9,025.00	LF	0.40	0.00	0.00	\$3,610.00	
	Diameter							
33021509	Water Quality Parameter Testing	4.00	WK	219.02	0.00	0.00	\$876.09	
	Device							
33021620	TAL Metals (EPA 6010/7000s),	90.00	EA	342.30	0.00	0.00	\$30,806.59	
	Water, Water Analysis							
33029501	Water Analysis EPA 8260B	90.00	LS	181.50	0.00	0.00	\$16,335.00	
33230510	4" Submersible Pump Rental,	3.00	WK	220.94	0.00	0.00	\$662.81	
	Week		77.1		0.00	0.00	\$502.01	
33231186	Well Development Equipment	4.00	WK	219.02	0.00	0.00	\$876.09	
	Rental (weekly)		7		0.00	0.00	ψο. σ.σσ	
		Total Element Cost					\$54,478.06	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 7 of 8

Element: General Monitoring

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
, , , ,			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010104	Car or Van Mileage Charge	320.00	MI	0.34	0.00	0.00	\$109.98	
33220108	Project Scientist	315.00	HR	0.00	22.44	0.00	\$7,068.54	
33220112	Field Technician	301.00	HR	0.00	14.98	0.00	\$4,507.81	
33220114	Word Processing/Clerical	45.00	HR	0.00	12.41	0.00	\$558.47	
33220115	Draftsman/CADD	45.00	HR	0.00	19.23	0.00	\$865.47	
			Total	Element Cost			\$13,110.27	
		То	tal 1st Year T		\$67,588.32			
		Total Phase Element Cost					\$88,872.58	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:06 PM

Page: 8 of 8

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

Labor 0.7743 (Modified)

(Modified)

Equipment 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1

ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 05

Type: Long Term Monitoring

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 7/1/2009

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:14 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	17.00	HR	0.00	37.28	0.00	\$633.76	
33220105	Project Engineer	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	30.00	HR	0.00	21.42	0.00	\$642.58	
			Total	Element Cost			\$2,187.38	
Element: In	terviews							
			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	20.00	HR	0.00	37.28	0.00	\$745.60	
			Total	Element Cost			\$745.60	
Element: Si	te Inspection							
			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						

Measure

12.00

37.00

HR

HR

Unit Cost

0.00

0.00

Unit Cost

37.28

27.60

Unit Cost

0.00

0.00

Cost Database Date: 2003

33220105

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:14 PM

33220102 Project Manager

Project Engineer

Page: 2 of 4

Cost Override

\$447.36

\$1,021.21

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220108	Project Scientist	23.00	HR	0.00	22.44	0.00	\$516.12	
33220109	Staff Scientist	26.00	HR	0.00	21.42	0.00	\$556.90	
			Total	Element Cost			\$2,541.59	

Element: Report

Assembly	Description	Quantitu	Unit of	Material	Labor	Equipment	Extended	Cost
•	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22.44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
			Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010108	Sedan, Automobile, Rental	5.00	DAY	46.58	0.00	0.00	\$232.90	
33010202	Per Diem (per person)	10.00	DAY	109.80	0.00	0.00	\$1,098.00	
33041101	Airfare	2.00	LS	0.00	0.00	0.00	\$0.00	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:14 PM

Page: 3 of 4

Total Element Cost \$1,330.90

Total 1st Year Technology Cost \$11,309.88

Total Phase Element Cost \$11,309.88

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:14 PM

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743 (Modified) **Equipment** 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 10

Type: Long Term Monitoring

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 7/1/2014

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

Media/Waste Type: Groundwater

O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:25 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	17.00	HR	0.00	37.28	0.00	\$633.76	
33220105	Project Engineer	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	30.00	HR	0.00	21.42	0.00	\$642.58	
			Total	Element Cost			\$2,187.38	
Element: In	nterviews							
A	Described	• "	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
00000400	B		Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	20.00	HR	0.00	37.28	0.00	\$745.60	
			Total	Element Cost			\$745.60	
Element: S	ite Inspection							
Assembly	Description	Quantitu	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Mossure	Unit Cost	Unit Cast	Unit Cont	Oc. 1	O
33220102	Project Manager	12.00	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
	Project Manager	12.00	HR	0.00	37.28	0.00	\$447.36	
33220105	Project Engineer	37.00	HR	0.00	27.60	0.00	\$1,021.21	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:25 PM

Page: 2 of 4

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33220108 33220109	Project Scientist Staff Scientist	23.00 26.00	Measure HR HR	Unit Cost 0.00 0.00	Unit Cost 22.44 21.42	Unit Cost 0.00 0.00	Cost \$516.12 \$556.90	Override
			Total	Element Cost			\$2,541.59	

Element: Report

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		4.4	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	• 1011100
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22,44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
		,	Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33010108	Sedan, Automobile, Rental	5.00	Measure DAY	Unit Cost 46.58	Unit Cost 0.00	Unit Cost 0.00	Cost \$232.90	Override
33010202 33041101	Per Diem (per person) Airfare	10.00 2.00	DAY LS	109.80 0.00	0.00 0.00	0.00 0.00	\$1,098.00 \$0.00	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:25 PM

Page: 3 of 4

Total Element Cost \$1,330.90

Total 1st Year Technology Cost \$11,309.88

Total Phase Element Cost \$11,309.88

Cost Database Date: 2003
Cost Type: User-Defined

Print Date: 5/19/2004 2:32:25 PM

Page: 4 of 4

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 15

Type: Long Term Monitoring

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 7/1/2019

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:38 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	17.00	HR	0.00	37.28	0.00	\$633.76	Override
33220105	Project Engineer	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	30.00	HR	0.00	21.42	0.00	\$642.58	
			Total	Element Cost			\$2,187.38	
Element: in	nterviews							
A = = = malala.	Description	0 "	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity					. .	
22222422	Duning at Manager	00.00	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	20.00	HR	0.00	37.28	0.00	\$745.60	
			Total	Element Cost			\$745.60	
Element: S	ite Inspection							
A = = =	Deposite to		Unit of	Material	Labor	Equipment	Extended	Cost

Measure

HR

HR

Unit Cost

0.00

0.00

Unit Cost

37.28

27.60

Unit Cost

0.00

0.00

Quantity

12.00

37.00

Cost Database Date: 2003 Cost Type: User-Defined

Assembly

33220102

33220105

Print Date: 5/19/2004 2:32:38 PM

Description

Project Manager

Project Engineer

Page: 2 of 4

Override

Cost

\$447.36

\$1,021.21

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	2000.1011	Quartity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220108	Project Scientist	23.00	HR	0.00	22.44	0.00	\$516.12	
33220109	Staff Scientist	26.00	HR	0.00	21.42	0.00	\$556.90	
			Total	Element Cost			\$2,541.59	

Element: Report

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
00000400	20001.pt.0.	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	3.73
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22.44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
			Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010108	Sedan, Automobile, Rental	5.00	DAY	46.58	0.00	0.00	\$232.90	
33010202	Per Diem (per person)	10.00	DAY	109.80	0.00	0.00	\$1,098.00	
33041101	Airfare	2.00	LS	0.00	0.00	0.00	\$0.00	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:38 PM

Page: 3 of 4

Total Element Cost \$1,330.90

Total 1st Year Technology Cost \$11,309.88

Total Phase Element Cost \$11,309.88

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:38 PM

Page: 4 of 4

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)
Labor 0.7743 (Modified)

Equipment 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 20 Media/Waste Type: Groundwater

Type: Long Term Monitoring Secondary Media/Waste Type: N/A

 Labor Rate Group:
 System Labor Rate

 Contaminant:
 Volatile Organic Compounds

(VOCs)

Analysis Rate Group: System Analysis Rate Secondary Contaminant: None

Approach: None Markup Template: System Defaults

Start Date: 7/1/2024 O&M Markup Template: N/A

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:53 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

			Unit of	Material	Lohor	Equipment	Extended	Coot
Assembly	Description	Quantity	Offic Of	Material	Labor	Equipment	Extended	Cost
•	•	,	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	17.00	HR	0.00	37.28	0.00	\$633.76	
33220105	Project Engineer	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	30.00	HR	0.00	21.42	0.00	\$642.58	
			Total	Element Cost			\$2,187.38	
Element: In	terviews							
			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
22222122			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	20.00	HR	0.00	37.28	0.00	\$745.60	
			Total	Element Cost			\$745.60	
Element: Si	te Inspection							
			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						

Measure

HR

HR

12.00

37.00

Unit Cost

0.00

0.00

Unit Cost

37.28

27.60

Unit Cost

0.00

0.00

Cost Database Date: 2003

33220102

33220105

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:53 PM

Project Manager

Project Engineer

Page: 2 of 4

Cost Override

\$447.36

\$1,021.21

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	•	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220108	Project Scientist	23.00	HR	0.00	22.44	0.00	\$516.12	
33220109	Staff Scientist	26.00	HR	0.00	21.42	0.00	\$556.90	
			Total	Element Cost			\$2,541.59	

Element: Report

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22.44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
			Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		·	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010108	Sedan, Automobile, Rental	5.00	DAY	46.58	0.00	0.00	\$232.90	
33010202	Per Diem (per person)	10.00	DAY	109.80	0.00	0.00	\$1,098.00	
33041101	Airfare	2.00	LS	0.00	0.00	0.00	\$0.00	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:32:53 PM

Page: 3 of 4

Total Element Cost

\$1,330.90

Total 1st Year Technology Cost

\$11,309.88

Total Phase Element Cost

\$11,309.88

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:32:53 PM

Page: 4 of 4

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

Labor 0.7743 (Modified)

(Modified)

Equipment 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 25

Type: Long Term Monitoring

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 7/1/2029

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:33:08 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

Assembly	Description	Oventity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	17.00	HR	0.00	37.28	0.00	\$633.76	Override
33220105	Project Engineer	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	30.00	HR	0.00	21.42	0.00	\$642.58	
			Total	Element Cost			\$2,187.38	
Element: In	nterviews							
A 1-1			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Magazira	Unit Cost	Unit Coot	U-:4 04	04	O
33220102	Project Manager	20.00	Measure HR	0.00	Unit Cost 37.28	Unit Cost 0.00	Cost \$745.60	Override
00220102	, rojost managor	20.00		Element Cost	37.20	0.00	\$7 45.60	
Element: S	ite Inspection							
Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	12.00	HR	0.00	37.28	0.00	\$447.36	Override
33220105	Project Engineer	37.00	HR	0.00	27.60	0.00	\$1,021.21	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:33:08 PM

2 of 4

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
_	·	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220108	Project Scientist	23.00	HR	0.00	22.44	0.00	\$516.12	
33220109	Staff Scientist	26.00	HR	0.00	21.42	0.00	\$556.90	
			Total	Element Cost			\$2,541.59	

Element: Report

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22.44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
			Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
		•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010108	Sedan, Automobile, Rental	5.00	DAY	46.58	0.00	0.00	\$232.90	
33010202	Per Diem (per person)	10.00	DAY	109.80	0.00	0.00	\$1,098.00	
33041101	Airfare	2.00	LS	0.00	0.00	0.00	\$0.00	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:33:08 PM

Page: 3 of 4

Total Element Cost

\$1,330.90

Total 1st Year Technology Cost

\$11,309.88

Total Phase Element Cost

\$11,309.88

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:33:08 PM

Page: 4 of 4

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

erial 1.0001 (Modified)

Labor 0.7743

Equipment 1.0881

(Modified) (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1 ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: 5 YR Review Year 30

Type: Long Term Monitoring

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 7/1/2034

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:33:20 PM

Page: 1 of 4

Technology: Five-Year Review

Element: Document Review

Assembly	Description		Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	•		_	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager		17.00	HR	0.00	37.28	0.00	\$633.76	
33220105	Project Engineer	I	20.00	HR	0.00	27.60	0.00	\$552.01	
33220108	Project Scientist	1	16.00	HR	0.00	22.44	0.00	\$359.04	
33220109	Staff Scientist	t .	30.00	HR	0.00	21.42	0.00	\$642.58	
				Total	Element Cost			\$2,187.38	
Element: In	terviews								

Assembly	ly Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33220102	Project Manager	20.00	Measure HR	Unit Cost 0.00	Unit Cost 37.28	Unit Cost 0.00	Cost \$745.60	Override
			Total	Element Cost			\$745.60	

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33220102 33220105	Project Manager Project Engineer	12.00 37.00	Measure HR HR	Unit Cost 0.00 0.00	Unit Cost 37.28 27.60	Unit Cost 0.00 0.00	Cost \$447.36 \$1,021.21	Override

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:33:20 PM

Page: 2 of 4

Element: Site Inspection

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	·	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220108	Project Scientist	23.00	HR	0.00	22.44	0.00	\$516.12	
33220109	Staff Scientist	26.00	HR	0.00	21.42	0.00	\$556.90	
			Total	Element Cost			\$2,541.59	

Element: Report

A l. l	December 15 (15 miles	9 44	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220102	Project Manager	19.00	HR	0.00	37.28	0.00	\$708.32	
33220105	Project Engineer	46.00	HR	0.00	27.60	0.00	\$1,269.61	
33220108	Project Scientist	41.00	HR	0.00	22.44	0.00	\$920.03	
33220109	Staff Scientist	75.00	HR	0.00	21.42	0.00	\$1,606.46	
			Total	Element Cost			\$4,504.42	

Element: Travel

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
_	•	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010108	Sedan, Automobile, Rental	5.00	DAY	46.58	0.00	0.00	\$232.90	
33010202	Per Diem (per person)	10.00	DAY	109.80	0.00	0.00	\$1,098.00	
33041101	Airfare	2.00	LS	0.00	0.00	0.00	\$0.00	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:33:20 PM

Page: 3 of 4

Total Element Cost \$1,330.90

Total 1st Year Technology Cost \$11,309.88

Total Phase Element Cost \$11,309.88

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:33:20 PM

Folder: Parker Landfill R04

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1 ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Site Closeout

Type: Site Close-out

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 8/1/2034

Media/Waste Type: Groundwater

Markup Template: System Defaults

Contaminant: Volatile Organic Compounds (VOCs)

O&M Markup Template: N/A

Secondary Contaminant: None

Secondary Media/Waste Type: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:44 PM

Page: 1 of 4

Technology: Site Close-Out Documentation

Element: Meetings

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220101	Senior Project Manager	4.00	HR	0.00	44.50	0.00	\$178.00	
33220102	Project Manager	80.00	HR	0.00	37.28	0.00	\$2,982.38	
33220106	Staff Engineer	60.00	HR	0.00	21.99	0.00	\$1,319.57	
33220114	Word Processing/Clerical	24.00	HR	0.00	12.41	0.00	\$297.85	
33220115	Draftsman/CADD	8.00	HR	0.00	19.23	0.00	\$153.86	
			Total	Element Cost			\$4,931.67	

Element: Work Plans & Reports

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220101	Senior Project Manager	60.00	HR	0.00	44.50	0.00	\$2,670.04	
33220102	Project Manager	300.00	HR	0.00	37.28	0.00	\$11,183.94	
33220104	Senior Staff Engineer	300.00	HR	0.00	37.21	0.00	\$11,163.54	
33220109	Staff Scientist	100.00	HR	0.00	21.42	0.00	\$2,141.94	
33220114	Word Processing/Clerical	166.00	HR	0.00	12.41	0.00	\$2,060.13	
33220115	Draftsman/CADD	80.00	HR	0.00	19.23	0.00	\$1,538.62	
			Total	Element Cost			\$30,758.20	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:31:44 PM

Element: Abandon wells

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
		_	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010107	Van or Pickup Rental	52.00	DAY	35.00	0.00	0.00	\$1,820.18	
33010202	Per Diem (per person)	104.00	DAY	109.80	0.00	0.00	\$11,419.20	
33220101	Senior Project Manager	2.00	HR	0.00	44.50	0.00	\$89.00	
33220102	Project Manager	204.00	HR	0.00	37.28	0.00	\$7,605.08	
33220106	Staff Engineer	200.00	HR	0.00	21.99	0.00	\$4,398.56	
33220109	Staff Scientist	200.00	HR	0.00	21,42	0.00	\$4,283.88	
33220114	Word Processing/Clerical	4.00	HR	0.00	12.41	0.00	\$49.64	
			Total	Element Cost			\$29,665.54	

Element: Documents

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity				• •		
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220101	Senior Project Manager	3.00	HR	0.00	44.50	0.00	\$133.50	
33220102	Project Manager	60.00	HR	0.00	37.28	0.00	\$2,236.79	
33220104	Senior Staff Engineer	60.00	HR	0.00	37.21	0.00	\$2,232.71	
33220106	Staff Engineer	150.00	HR	0.00	21.99	0.00	\$3,298.92	
33220114	Word Processing/Clerical	60.00	HR	0.00	12.41	0.00	\$744.62	
33220115	Draftsman/CADD	40.00	HR	0.00	19.23	0.00	\$769.31	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:44 PM

Page: 3 of 4

Element: Documents

Accombly	Description	O	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33440102	Standard Record Storage Carton (Month)	840.00	MO	0.00	0.36	0.00	\$302.06	
33440105	Standard Storage Carton	10.00	EA	2.32	1.94	0.00	\$42.61	
33440113	Pickup Boxes (Per Box)	10.00	EA	0.00	1.94	0.00	\$19.44	
			Total	Element Cost			\$9,779.96	
		То	otal 1st Year T	echnology Cos	st		\$75,135.36	
	•		Total	Phase Elemen	it Cost		\$75,135.36	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:31:44 PM

Page: 4 of 4

Residual Waste Management Summary Report

Folder: Parker Landfill R05

Project

Name: 110 GPM Parker Landfill

ID: Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 Labor 0.7743 (Modified) (Modified)

- Labor 6.17+0

(Modified)

Equipment 1.0881

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Pump and Treat

Type: Remedial Action

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: Ex Situ

Media/Waste Type: Groundwater

Secondary Media/Waste N/A

Contaminant: Volatile Organic Compounds (VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: System Defaults

Technology	Seq.#	Residual Waste Generated	Value	Units
Groundwater Extraction Wells	; 1	Drill Cuttings	9	Drums
Groundwater Monitoring Well	1	Drill Cuttings	53	Drums
Discharge to POTW	1	Existing Cover	64.81	CY
Groundwater Extraction Wells	: 1	Drill Cuttings	9	Drums
Groundwater Monitoring Well	1	Drill Cuttings	53	Drums
Discharge to POTW	1	Existing Cover	64.81	CY

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:46:41 AM

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Project ID: Parker Landfill Site Name: Alternative 1 Site Type: Groundwater Site ID: Parker Landfill Year Location: VERMONT STATE AVERAGE, VERMONT

Report Option: Fiscal

Initial Phase Element Start Date: 2/1/2004

Year		:	1		2		3		4	T	5		6		7		8		9	i	10
Fiscal Year			2004		2005	İ	2006		2007		2008		2009		2010		2011		2012		2013
Cost Type	Description	- :		<u> </u>		<u> </u>				:		<u> </u>		;		<u> </u>		<u> </u>		<u> </u>	
Studies	Pre-Design Investigation	\$	385,481			<u> </u>				:										<u> </u>	
Remedial Design	Design	-	1,378,246	<u> </u>		-										<u> </u>		;			
Remedial Action	Advanced Oxidation Processes	\$	421,992	<u> </u>										!		<u> </u>		:			
Remedial Action	Carbon Adsorption (Gas)	\$	54,417	!								<u>:</u>		i		!					
Remedial Action	Carbon Adsorption (Liquid)	\$	52,489			<u> </u>			·			ļ 									
Remedial Action	Coagulation/Flocculation	\$	154,824											ļ							
Remedial Action	Discharge to POTW	\$	30,804							<u> </u>						i				:	
Remedial Action	Groundwater Monitoring Well	\$	78,076							<u> </u>										-	
Remedial Action	Groundwater Extraction Wells	\$	105,264	· ·																	
Remedial Action	Media Filtration	\$	74,097									:							-		
Remedial Action	Miscellaneous Field Installation	\$	63,254	Ĺ.,		:											:		<u>, </u>		
Remedial Action	Metals Precipitation	\$	321,951			:														-	
Remedial Action	Metals Precipitation	\$	292,608				···]					-		•				
Remedial Action	Overhead Electrical Distribution	\$	15,189							İ											
Remedial Action	Off-site Transportation and Waste Disposal	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700
Remedial Action	Professional Labor Management	: \$	3,063,971									i									
Remedial Action	ION EXCHANGE	\$	641,230																	T	
Remedial Action	Residual Waste Management	\$	4,047							1				!						İ	
Long Term Monitoring	GW Monitoring	\$	101,925	\$	152,811	\$	152,811	\$	152,811	\$	152,811	\$	131,091	\$	120,247	\$	120,247	\$	120,247	\$	120,247
Long Term Monitoring	5 YR Review Year 05	-										\$	32,680				i				
Long Term Monitoring	5 YR Review Year 10															: -				† ·	
Long Term Monitoring	5 YR Review Year 15																				
Long Term Monitoring	5 YR Review Year 20					Τ				•											
Long Term Monitoring	5 YR Review Year 25					T .								-							
Long Term Monitoring	5 YR Review Year 30	<u> </u>				1 .						:							*		
O&M	Miscellaneous Support Costs	\$	1,075,737	\$	1,136,254	\$	1,247,993	\$	1,136,254			\$	409,953	\$	1,136,254	\$	1,247,993	\$	1.136.254		
O&M	Groundwater Extraction Wells	\$	10,046	\$	17,221	\$	17,221	\$	17,221	\$	17,221	\$	17,221	\$	17,221				17,221		17,221
O&M	Media Filtration	-	18,177	\$	31,161	\$	31,161	\$	31,161	+	31,161		31,161	_	31,161		31,161		31,161		31,161
O&M	Carbon Adsorption (Liquid)	\$	32,056	\$	51,980	\$	45,396	\$	40,724		38,919		37,942	_	37,326		36,901		36,590		36,352
O&M	Coagulation/Flocculation	\$	40,356	\$	69,182		69,182		69,182	<u> </u>	69,182		69,182		69,182		69,182		69,182	+	69,182
O&M	Metals Precipitation	\$	45,967	\$	69,355	+	48,437		33,592	+ -	27,856	-	24,752		22,796		21,446		20,458		19,703
O&M	Metals Precipitation	\$	95,961	\$	157,210	-	141,060		129,598	-	125,170	-	122,773		121,263	-	120,221	_	119,458	+	118,875
O&M	Advanced Oxidation Processes	\$	574,867	<u> </u>	985,486	_	985,486		985,486	<u> </u>	985,486		985,486		985,486		985,486		985,486	+	985,486
O&M	Carbon Adsorption (Gas)	\$	34,426		56,006	+	49,341		44,611		42,783	 	41,794		41,170		40,740		40,425	i –	40,185
O&M	Discharge to POTW	\$	3,647	-	6,252	+	6,252		6,252	-	6,252		6,252		6,252		6,252	-	6,252	-	6,252
		l ~	5,047	Ψ		۳.	0,202	Ψ		Ψ	U,ZUZ	Ψ	0,202	Ψ		Ψ	0,202	Φ	0,232	: D	0,252

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Project ID: Parker Landfill Site Name: Alternative 1

Location: VERMONT STATE AVERAGE, VERMONT

Report Option: Fiscal

Initial Phase Element Start Date: 2/1/2004

Site Type: Groundwater Site ID: Parker Landfill

Year	-	 1	2	3	4	5 .	6	7	8	9	10
Fiscal Year		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Cost Type	Description	 		:		i					20.0
Site Close-out	Site Closeout		:								
Sub-Total		\$ 9,323,805	\$ 2,885,618	\$ 2,947,040	\$ 2,799,592	\$ 1,649,541	\$ 2,062,987	\$ 2,741,058	2.849,550 \$	2,735,434 \$	1,597,364
Real Discount	6.95%	 0.9363	0.8768	0.8209	0.7687	0.7198	0.6739	0.6311	0.5909	0.5533	0.5181
Nominal Discount	8.70%	 0.9200	0.8463	0.7786	0.7163	0.6589	0.6062	0.5577	0.5131	0.4720	0.4342
Inflation	1.75%	 1.0178	1.0359	1.0544	1.0732	1.0923	1,1117	1.1315	1.1517	1.1722	1.1931
Total	10.0	\$ 8,730,338	\$ 2,529,966	\$ 2,419,356	\$ 2,152,020	\$ 1,187,278	\$ 1,390,349	\$ 1,729,751	1,683,757 \$	1,513,447	

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Year			11		12		13		14		15	:	16		17	Ţ	18		19	i	20
Fiscal Year			2014	1	2015	ļ	2016		2017		2018		2019		2020	:	2021		2022	:	2023
Cost Type Studies	Description			<u> </u>		<u> </u>		<u> </u>		<u> </u>				<u> </u>						<u> </u>	
	Pre-Design Investigation			-						ļ											
Remedial Design	Design			<u> </u>		·				ļ											
Remedial Action	Advanced Oxidation Processes										İ			ļ				:			
Remedial Action	Carbon Adsorption (Gas)	<u> </u>																			
Remedial Action	Carbon Adsorption (Liquid)																			İ	
Remedial Action	Coagulation/Flocculation																	!			
Remedial Action	Discharge to POTW													:		:				İ	
Remedial Action	Groundwater Monitoring Well													:		!	. — . — . — .				
Remedial Action	Groundwater Extraction Wells															i					
Remedial Action	Media Filtration	:								T				!							
Remedial Action	Miscellaneous Field Installation																				
Remedial Action	Metals Precipitation									•								:			
Remedial Action	Metals Precipitation								·											:	
Remedial Action	Overhead Electrical Distribution									:						1				-	
Remedial Action	Off-site Transportation and Waste Disposal	\$	152,700	. \$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,700	\$	152,699	\$	152,699	\$	152,699
Remedial Action	Professional Labor Management															+-					
Remedial Action	ION EXCHANGE			i		ļ-···-										-					
Remedial Action	Residual Waste Management					†										-				-	
Long Term Monitoring	GW Monitoring	\$	120,247	\$	120,247	\$	120,247	\$	120,247	\$	120,247	\$	120,247	\$	120,247	\$	120,247	\$	120,247	i s	120,247
Long Term Monitoring	5 YR Review Year 05					! -											·		,	•	
Long Term Monitoring	5 YR Review Year 10	\$	32,680															:			
Long Term Monitoring	5 YR Review Year 15	·				-				!		\$	32,680				-	-			
Long Term Monitoring	5 YR Review Year 20	:				ļ	,											:			
Long Term Monitoring	5 YR Review Year 25	- :									i i							1 -		i	
Long Term Monitoring	5 YR Review Year 30					İ				–				<u>.</u>		1				<u> </u>	
O&M	Miscellaneous Support Costs	-		\$	1,136,254	\$	1,247,993	\$	1.136.254	 !		\$	409,953	\$	1,136,254	<u> </u>	1,247,993	\$	1,136,254	<u> </u>	
O&M	Groundwater Extraction Wells		17,221		17,221	\$		\$	17,221	\$	17,221		17,221	-	17,221	+ -	17,221		17,221	\$	17,221
O&M	Media Filtration	\$	31,161		31,161	<u> </u>	31,161		31,161	 	31,161		31,161	-	31,161	i -	31,161		31,161	•	31,161
O&M	Carbon Adsorption (Liquid)	\$	36,165		36,013	-	35,887		35,782	 -	35,692		35,615	-	35,547	+	35,488	<u> </u>	35,435	-	35,388
O&M	Coagulation/Flocculation	- \$	69,182	\$	69,182	-	69,182		69,182	—-	69,182		69,182	<u> </u>	69,182		69,182		69,182	-	69,182
O&M	Metals Precipitation		19,107	\$	18,624		18,226		17,891	-	17,605		17,359	-	17,144		16,956	+	16,789		16,640
O&M	Metals Precipitation	\$	118,415	\$	118,042		117,734		117,475		117,255		117,065		116,899		116,754	+-	116,625	-	116,510
O&M	Advanced Oxidation Processes		985,486	Ļ.	985,486	\$	985,486	·	985,486		985,486		985,486	`	985,486	-	985,486	+	985,486	<u> </u>	985,486
O&M	Carbon Adsorption (Gas)	\$	39,995	<u> </u>	39,841	\$	39,714		39,607	-	39,516	-	39,438	<u> </u>	39,370	 		•		<u> </u>	•
O&M	Discharge to POTW	\$	6,252		6,252		6,252		6,252		6,252		6,252			<u> </u>	39,310	-	39,256	-	39,209
			0,232	Ψ	0,402	įΨ	0,202	Φ	0,232	· •	0,252	Ф	0,202	.⊅	6,252	Þ	6,252	\$	6,252	\$	6,252

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Year			11	12	13	14	15	16	17	18	19	20
Fiscal Year			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cost Type	Description											2020
Site Close-out	Site Closeout			:					i	··		···
Sub-Total		\$	1,628,611	\$ 2,731,023	\$ 2,841,803	\$ 2,729,258	\$ 1,592,317 \$	2,034,359	\$ 2,727,463 \$	2.838.749 \$	2,726,607	\$ 1,589,995
Real Discount	6.95%		0.4851	0.4542	0.4253	0.3982	0.3729	0.3491	0.3269	0.3061	0.2866	0.2684
Nominal Discount	8.70%		0.3995	0.3675	0.3381	0.3110	0.2861	0.2632	0.2422	0.2228	0.2049	0.1885
Inflation	1.75%		1.2143	1.2360	1.2580	1.2804	1.3032	1.3264	1.3500	1.3741	1.3986	1.4235
Total		\$	790,013	\$ 1,240,452	\$ 1,208,611	\$ 1,086,864	\$ 593,742 \$	710,287	\$ 891,668 \$	868,979 \$	781,524	\$ 426,731

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Year		i .	21		22	1	23	2			25		26	1	27		28	2	29		30
Fiscal Year Cost Type	Danadatian		2024		2025	20	026	20	27		2028		2029		2030	i	2031	20	32		2033
Studies	Description Pre-Design Investigation			<u> </u>		<u> </u>				;				<u> </u>		<u>i </u>					
Remedial Design	Design					 						ļ					:		_		
Remedial Action	Advanced Oxidation Processes					<u> </u>				-		 	·		·	ļ					
Remedial Action	Carbon Adsorption (Gas)		·			 						:									
Remedial Action	Carbon Adsorption (Gas)					ļ						:									
Remedial Action	Coagulation/Flocculation					<u> </u>						: †									
Remedial Action	Discharge to POTW			<u> </u>										<u> </u>	· · 						<u>-</u>
Remedial Action	Groundwater Monitoring Well			<u> </u>			•					<u> </u>		<u> </u>		-					
Remedial Action	Groundwater Extraction Wells					:								-	<u> </u>	:	<u> </u>				
Remedial Action	Media Filtration					1				<u> </u>				<u>.</u>			<u> </u>	_			
Remedial Action	Miscellaneous Field Installation	 -		<u> </u>		-				<u> </u>						: -					
Remedial Action	Metals Precipitation	<u>;</u>		1										• • • • • • • • • • • • • • • • • • • •		1					
Remedial Action	Metals Precipitation			1			i									<u> </u>					
Remedial Action	Overhead Electrical Distribution					-				<u>: </u>									!		
Remedial Action	Off-site Transportation and Waste Disposal	\$	152,699	 \$	152,699	\$ 1	152,699	\$ 15	E0 000		450.000	. ^	450.000		450.000	ļ		•		_	
Remedial Action	Professional Labor Management	- Φ	132,088	Ψ	152,699	Φ	152,699	a 10	52,699	\$	152,699	Ъ	152,699	\$	152,699	3	152,699	\$ 1	52,699	\$	152,699
Remedial Action	ION EXCHANGE					<u> </u>										-					
Remedial Action	Residual Waste Management			:	—·	!							·								
Long Term Monitoring	GW Monitoring	\$	120,247	•	120,247	: e 1	120,247	e 10	20,247	\$	100.047		444.505	•	444 750	Φ.		• •	44.750	_	
Long Term Monitoring	5 YR Review Year 05	ΙΨ	120,247	Ψ	120,247	. φ	120,247	Ψ 12	20,241	Φ	120,247	Ð	114,585	\$	111,758	Ф	111,758	\$ 1	11,758	\$	111,758
Long Term Monitoring	5 YR Review Year 10						·:			-		<u> </u>									
Long Term Monitoring	5 YR Review Year 15			<u> </u>		,				-	 -										
Long Term Monitoring	5 YR Review Year 20	i \$	32,680		·	 						<u> </u>				;					
Long Term Monitoring	5 YR Review Year 25											\$	32,680	r · · · -		<u> </u>					. ———
Long Term Monitoring	5 YR Review Year 30			:						-		Ψ	32,000				:				
O&M	Miscellaneous Support Costs		 ,	\$ 1	,136,254	\$ 12	47 993	\$ 113	36 254			i : \$	409,953	\$	1 136 25/	æ	1,247,993	 \$ 11	26.254		
O&M	Groundwater Extraction Wells	\$	17,221		17,221	· ·			17,221	\$	17,221		17,221	-	17,221		17,221		17,221	œ.	17,221
O&M	Media Filtration	\$	31,161		31,161	-	31,161		31,161	<u> </u>	31,161		31,161	-	31,161		31,161		31,161		31,161
O&M	Carbon Adsorption (Liquid)	\$	35,346	<u> </u>	35,308		35,274	-	35,242	<u> </u>	35,213	<u>-</u>	35,187		35,163	•	35,140	-	35,119		35,100
O&M	Coagulation/Flocculation	\$	69,182		69,182	-	69.182		69,182	<u> </u>	69,182	<u> </u>	69,182	! 	69,182	+	69,182		69,182		69,182
O&M	Metals Precipitation	\$	16,506	<u> </u>	16,385	<u> </u>	16,276		16,176		16,085	i -	16,001	-	15,923	÷	15,852			\$	15,724
O&M	Metals Precipitation	\$	116,406		116,313	<u> </u>	16,229	·——	16,152		116,081	_	116,016		115,957		115,901	-	15,850		115,803
O&M	Advanced Oxidation Processes	\$	985,486	1	985,486	 			85,486	-	985,486		985,486		985,486	-	985,486		85,486		985,486
O&M	Carbon Adsorption (Gas)	\$	39,166		39,128		39,093		39,061	 	39,032	<u> </u>	39,005		38,981	-	38,958		38,937		38,917
O&M	Discharge to POTW		6,252		6,252	<u> </u>	6,252		6,252	-	6,252		6,252		6.252	<u> </u>	6,252		6,252		6,252

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Year		 21	22	23	24	25	26	27	28	29	30
Fiscal Year		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Cost Type	Description					:			2001	2002	2000
Site Close-out	Site Closeout										
Sub-Total		\$ 1,622,352	2,725,636	\$ 2.837,113	\$ 2,725,133	\$ 1.588.659	\$ 2,025,428	\$ 2,716,037	\$ 2,827,603	\$ 2,715,705 \$	1,579,303
Real Discount	6.95%	 0.2513	0.2353	0.2203	+		0.1809	0.1694	0.1586	0.1485	0.1390
Nominal Discount	8.70%	0.1735	0.1596	0.1468			0.1143	0.1051	0.0967	0.0890	0.0819
Inflation	1.75%	1.4488	1.4746	1.5009	1.5276	1.5548	1.5825	1.6107	1.6394	1.6686	1.6983
Total		\$ 407,700	641,360	\$ 625,098	\$ 562,208	\$ 306,887	\$ 366,355	\$ 460,001	\$ 448,414	\$ 403,257 \$	219,585

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Site ID: Parker Landfill					
Year			31		
Fiscal Year	Danadatian	•	2034		
Cost Type Studies	Description Pre-Design Investigation			•	Total
Remedial Design	Design Investigation			\$	385,481
Remedial Action		·		\$	1,378,246
Remedial Action	Advanced Oxidation Processes			\$	421,992
Remedial Action	Carbon Advantion (Gas)			\$	54,417
	Carbon Adsorption (Liquid)			\$	52,489
Remedial Action	Coagulation/Flocculation			\$	154,824
Remedial Action	Discharge to POTW			\$	30,804
Remedial Action	Groundwater Monitoring Well			\$	78,076
Remedial Action	Groundwater Extraction Wells			\$	105,264
Remedial Action	Media Filtration			\$	74,097
Remedial Action	Miscellaneous Field Installation			\$	63,254
Remedial Action	Metals Precipitation			\$	321,951
Remedial Action	Metals Precipitation			\$	292,608
Remedial Action	Overhead Electrical Distribution			\$	15,189
Remedial Action	Off-site Transportation and Waste Disposal			\$	4,580,987
Remedial Action	Professional Labor Management			\$	3,063,971
Remedial Action	ION EXCHANGE			\$	641,230
Remedial Action	Residual Waste Management			\$	4,047
Long Term Monitoring	GW Monitoring	\$	37,215	\$	3,727,785
Long Term Monitoring	5 YR Review Year 05			\$	32,680
Long Term Monitoring	5 YR Review Year 10			\$	32,680
Long Term Monitoring	5 YR Review Year 15			\$	32,680
Long Term Monitoring	5 YR Review Year 20			\$	32,680
Long Term Monitoring	5 YR Review Year 25			\$	32,680
Long Term Monitoring	5 YR Review Year 30	\$	32,680	\$	32,680
O&M	Miscellaneous Support Costs			\$:	23,428,602
O&M	Groundwater Extraction Wells	\$	7,176	\$	516,631
O&M	Media Filtration	\$	12,984	\$	934,830
O&M	Carbon Adsorption (Liquid)	\$	14,622	\$	1,117,912
O&M	Coagulation/Flocculation	\$	28,826	\$	2,075,460
O&M	Metals Precipitation	\$	6,541	\$	677,958
O&M	Metals Precipitation	\$	48,243	\$	3,633,314
O&M	Advanced Oxidation Processes	\$	410,619	\$:	29,564,580
O&M	Carbon Adsorption (Gas)	\$	16,212	\$	1,233,227
O&M	Discharge to POTW	\$	2,605	\$	187,560
			_,,,,,		,

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Year		31	
Fiscal Year		2034	
Cost Type	Description		Total
Site Close-out	Site Closeout	\$ 201,936	\$ 201,936
Sub-Total		\$ 819,659	\$ 79,214,802
Real Discount	6.95%	0.1302	
Nominal Discount	8.70%	0.0753	
Inflation	1.75%	1.7286	
Total		\$ 106,711	\$ 37,310,238

Site Cost Over Time

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Project ID: Parker Landfill

Site Name: Afternative 1

Initial Phase Element Start Date: 2/1/2004

Report Option: Fiscal

Site Type: Groundwater

Site ID: Parker Landfill

Year			1																							
Calendar Year			2004	2 200	:	3 2006	١,	4	5 2008	.	6		7	8		9	10		11	12	13	14	15	16		17
Phase Element	Phase Element Name		2004	200		2000	•	1001	2008	`	2009		2010	201	11	2012	2013		2014	2015	2016	2017	2018	2019	İ	2020
Studies	Pre-Design Investigation	\$	385,481									<u> </u>		<u> </u>	<u>i</u>			-								
Remedial Design	Design		1,378,246																						_	
Remedial Action	Advanced Oxidation Processes	+								_		-		!				_								
Remedial Action		\$	421,992		-							-					ļ							ļ		
Remedial Action	Carbon Adsorption (Gas)	\$	54,417				ļ. —							<u>.</u>				_			<u> </u>					
	Carbon Adsorption (Liquid)	\$	52,489		_																	<u> i</u>		İ		
Remedial Action	Coagulation/Flocculation	\$	154,824				 	4				_												İ		
Remedial Action	Discharge to POTW	- \$ 	30,804				-											i				i		İ		
Remedial Action	Groundwater Monitoring Well	: \$	78,076				<u> </u>											:_								
Remedial Action	Groundwater Extraction Wells	: \$	105,264																							
Remedial Action	Media Filtration	\$	74,097		.																					
Remedial Action	Miscellaneous Field Installation	; \$	63,254					i																T		
Remedial Action	Metals Precipitation	; \$	321,951					i														<u>†</u>		:	\neg	
Remedial Action	Metals Precipitation	\$	292,608					Ī				_ -													\neg	
Remedial Action	Overhead Electrical Distribution	\$	15,189									_1					İ					i				
Remedial Action	Off-site Transportation and Waste	\$	152,700	\$ 152	700 \$	152,700	\$ '	152,700	\$ 152	700 \$	152,70	00 \$	152,700	\$ 15	2,700 \$	\$ 152,700	\$ 152,70	00 \$	152,700 \$	152,700	\$ 152,700	\$ 152,700	\$ 152,700	\$ 152.7	700 \$	152,700
Remedial Action	Professional Labor Management	\$ 3	3,063,971			~	:					i						-						1		
Remedial Action	ION EXCHANGE	\$	641,230					Ť					-					i				1	- ··	i		
Remedial Action	Residual Waste Management	\$	4,047				1	ĺ										\neg			 	i				
Long Term Monitoring	GW Manitoring	\$	101,925	\$ 152	811 \$	152,811	\$	152,811	\$ 152	811 \$	131,09	91 \$	120,247	\$ 12	0.247 5	\$ 120,247	\$ 120,24	47 8	120,247 \$	120 247	\$ 120,247	\$ 120.247	\$ 120,247	: !\$ 120.5	247 . \$	120,247
Long Term Monitoring	5 YR Review Year 05						i			\$,	-	,			120,211	,			120,241
Long Term Monitoring	5 YR Review Year 10	i			1		1			- } -							-	- -	32,680							~
Long Term Menitoring	5 YR Review Year 15																·	+						\$ 32.6		
Long Term Monitoring	5 YR Review Year 20	! "					†			-÷					· ·									¥ 02,0	-	
Long Term Monitoring	5 YR Review Year 25	1					 			_								+						•	_	
Long Term Monitoring	5 YR Review Year 30	1					1	- 1																	-	
O&M	Miscellaneous Support Costs	\$ ^	1,075,737	\$ 1,136	254 . \$	1,247,993	\$ 1,	136,254		s	409.95	 53 \$	1.136.254	\$ 1.24	7.993 \$	\$ 1,136,254				1 136 254	\$ 1,247,993	\$ 1 136 254		\$ 409.9	253 8	1 136 254
O&M	Groundwater Extraction Wells	\$	10,046	\$ 17	221 \$	17,221	s	17,221	\$ 17	221 \$	17.22	21 \$	17.221		7,221 5		. \$ 17,22	21 8	17,221 - \$			\$ 17,221	\$ 17,221			17,221
O&M	Media Filtration	\$	18,177	\$ 31	.161 . \$	31,161		31,161		161 \$	31,16				1,161				31,161 : \$		\$ 31,161		\$ 31,161		_	31,161
M&Q	Carbon Adsorption (Liquid)	\$	32,056	\$ 51	980 \$	45,396		40,724		919 S		12 \$		-	6,901	\$ 36,590		52 S	36,165 \$			\$ 35,782	•		315 \$	35,547
M&O	Coagulation/Flocoulation	1.\$	40,356	\$ 69	182 \$		+	69,182		182 \$	69,18				9.182				69.182 \$		\$ 69,182	\$ 69,182				69,182
O&M	Metals Precipitation	\$	45,967		355 \$		+	33,592		856 \$	~			-	1,446 \$			_ i	19,107 \$				\$ 17,605			17,144
O&M	Metals Precipitation	\$	95,961		210 \$			129,598		170 \$					0,221				118,415 : \$				\$ 17,005		_	116,899
O&M	Advanced Oxidation Processes	\$	574,867		486 \$	985,486				486 \$	985.48	_	985,486		5.486 \$			- 1	985.486 \$			\$ 985,486	•	-	_	985,486
O&M	Carbon Adsorption (Gas)	\$	34,426		.006 \$	· · ·		44,611		783 \$	41,79		41,170		0,740	40,425	\$ 40,18	- 1	39,995 \$	39,841	\$ 39,714				- + -	
O&M	Discharge to POTW	<u> </u>			252 \$			6,252		252 \$		52 \$	6,252		6,252											39,370
Site Close-out	Site Closeout			*	,202 4	0,202	+	0,202	Ψ 0,	202 φ	— - ^{0,2} `	, p	0,202	φ	0,232		a 6,28	52 \$	6,252 \$	6,252	\$ 6,252	\$ 6,252	\$ 6,252	\$ 6,2	252 \$	6,252
Current Work Estimate (: \$ 9	3.323.805	\$ 2885	618 \$	2,947,040	5 2	799 692 I	\$ 1.640	541 \$	2 062 06	1 27 T & T	2 741 058	\$ 284	0.550	2 725 424	\$ 1507.26	EA L &	1 620 611 0	2 721 0221	£ 0.944.903	\$ 2,729,258	6 4 500 047		i reo T è	0.707.400
Super. & Admin. (S&A	8.00%	\$	745,904	\$ 230	849 \$	235,763		223,967		963 \$	165,03				7,964		\$ 1,597,36		130,289 \$				\$ 1,592,317 \$ 127,385		749 \$	2,727,463
Super. & Review (S&R) Eng. Des./Const.	3,50% 1.50%	\$	326,333		997 \$	103,146		21,000		734 \$	72,20)5 \$	95,937	\$ 9	9,734 \$	95,740	\$ 55,90	08 \$	57,001 \$	95,586	\$ 99,463	\$ 95,524	\$ 55,731	\$ 71,2	203 \$	95,461
Escalation Factor	1.30%	\$ 	139,857		284 \$	44,206 1.078		1,1019		743 \$ 1262	30,94		41,116 1.1764		2,743 \$ 1.2023	\$ 41,032 1.2286			24,429 \$ 1.281	40,965 1,3072	\$ 42,627 1,33341	\$ 40,939 i 1,3596			15 \$	40,912
Program Amount		\$ 10									2,683,18	33 \$	3,643,776	\$ 3,87	1,396	3,797,652	\$ 2,264.94	41 \$	2,357,463 S	4,034,092	\$ 4,281,864	\$ 4,193,090	1.3859 \$ 2.493.675	\$ 3,246.1	121	1.4383
														-,,						.,00.,042	- 1,201,004	, 100,000	, , 2,400,070	, , ∪, ≥, →0,	4 1 4	., .02,000

Site Cost Over Time

Folder: Parker Landfill

Project Name: 170 GPM Parker Landfill

Project ID: Parker Landfill

Site Name: Alternative 1

Site Type: Groundwater

Site ID: Parker Landfill

\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Total 385,481 1,378,246 421,992 54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987 3,083,971
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	385,481 1,378,246 421,992 54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	385,481 1,378,246 421,992 54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,378,246 421,992 54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	421,992 54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	54,417 52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	52,489 154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	154,824 30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	30,804 78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	78,076 105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$	105,264 74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$ \$	74,097 63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$ \$	63,254 321,951 292,608 15,189 4,580,987
\$ \$ \$	321,951 292,608 15,189 4,580,987
\$ \$ \$	292,608 15,189 4,580,987
\$	15,189 4,580,987
\$	4,580,987
	641,230
	4,047
	3,727,785
	32,680
	32,680
	32,680
	32,680
	32,680
	32,680
	23,428,602
	516,631
	934,830
	1,117,912
	2,075,460
	677,958
_	3,633,314
	29,564,580
12 \$	1,233,227
105 \$	187,560
36 \$	201,936
59 \$	79,214,802
188	
95	
053	122,331,233
177 188 177 171 171 171 171 171 171 171	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$

Site Cost Summary Report (with Markups)

Folder: Parker Landfill R05

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label48

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

<u>Phase</u>	Direct Cost	<u>Markups</u>	Total Cost
Studies	\$128,763	\$256,718	\$385,481
Remedial Design	\$873,650	\$504,596	\$1,378,246
Remedial Action (Capital)	\$6,310,456	\$3,644,744	\$9,955,200
Operations & Maintenance	\$45,755,888	\$17,614,204	\$63,370,092
Operations & Maintenance	\$0	\$0	\$0
Long Term Monitoring	\$2,291,281	\$1,632,583	\$3,923,864
Site Close-out	\$75,135	\$126,801	\$201,936
Total Site Cost	\$55,435,173	\$23,779,647	\$79,214,820
		Escalation	\$27,356,948
	Es	calated Site Cost	\$106,571,768

Cost Database Date: 2003

Cost Type: User-Defined

Site Cost Detail Report (with Markups)

Folder: Parker Landfill R05

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743 (Modified) **Equipment** 1.0881 (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Flement

i nase Element		General		Sub	Markup	Prime		Owner	Markup	
(Markup Template)	Direct Cost	Conditions	Overhead	Profit	on Sub	Profit	Risk	Cost	Total	Total
5 YR Review Year 05	\$11 ,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
5 YR Review Year 10	\$11,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
5 YR Review Year 15	\$11,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:03 AM

Page: 1 of 3

Site Cost Detail Report (with Markups)

Prime

Phase Element										
(Markup Template)	Direct Cost	General Conditions	Overhead	Sub Profit	Markup on Sub	Prime Profit	Risk	Owner Cost	Markup Total	Total
5 YR Review Year 20 (System Defaults)	\$11,310	\$1,525	\$15,985	\$0	\$0	\$2,356	\$0		\$21,370	\$32,680
5 YR Review Year 25	\$11,310	ψ1,020	ψ15,965	ΨΟ	Φ0	φ2,330	ΦΟ	\$1,504	\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
5 YR Review Year 30	\$11 ,310								\$21,370	\$32,680
(System Defaults)		\$1,525	\$15,985	\$0	\$0	\$2,356	\$0	\$1,504		
GW Monitoring	\$2,223,421	* 4			_				\$1,504,363	\$3,727,784
(System Defaults)		\$175,587	\$873,131	\$0	\$0	\$278,132	\$0	\$177,514		
O&M	\$0	•	•	4-				_	\$0	\$0
(System Defaults)		\$0	\$0	\$0	\$0	\$0	\$0	\$0		
O&M (O&M)	\$45,755,888	*** 0.4.0.04.4	#7 570 000		•	*			\$17,614,204	\$63,370,092
(System Defaults)		\$2,310,014	\$7,579,686	\$0	\$0	\$4,715,137	\$0	\$3,009,367		
Pre-Design Investigation	\$128,763	•• ••-							\$256,718	\$385,481
(System Defaults)		\$6,467	\$203,134	\$0	\$0	\$28,761	\$0	\$18,356		
Pump and Treat	\$6,310,456	***	*						\$3,644,744	\$9,955,200
(System Defaults)		\$328,111	\$2,099,814	\$0	\$0	\$742,762	\$0	\$474,057		
Pump and Treat - Remedial Design (20%)	\$873,650								\$504,596	\$1,378,246
Site Closeout	\$75,135								\$126,801	\$201,936
(System Defaults)		\$4,813	\$98,701	\$0	\$0	\$14,215	\$0	\$9,072	, ,,,,,,	¥===,= =

Cost Database Date: 2003

Phase Flamont

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:03 AM

Page: 2 of 3

Site Cost Detail Report (with Markups)

Phase Element		Prime								
(Markup Template) Total Site Cost	Direct Cost \$55,435,173			Sub Profit \$0	Markup on Sub \$0	Prime Profit \$5,793,144	Risk \$0	Owner Cost \$3,697,389	Markup Total \$23,779,647	Total \$79,214,820
							Escalati	on		\$27,356,948
						Escalate	ed Site Co	st		\$106,571,768

Cost Database Date: 2003 Cost Type: User-Defined

Folder: Parker Landfill R04

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Pre-Design Investigation

Type: Studies

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: None

Start Date: 2/1/2004

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:41:36 PM

Page: 1 of 3

Technology: Remedial Investigation

Element: Scoping

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010104	Car or Van Mileage Charge	20.00	MI	0.34	0.00	0.00	\$6.87	
33220102	Project Manager	100.00	HR	0.00	37.28	0.00	\$3,727.98	
33220105	Project Engineer	400.00	HR	0.00	27.60	0.00	\$11,040.12	
33220106	Staff Engineer	400.00	HR	0.00	21.99	0.00	\$8,797.12	
33220108	Project Scientist	300.00	HR	0.00	22.44	0.00	\$6,731.94	
33220109	Staff Scientist	500.00	HR	0.00	21.42	0.00	\$10,709.70	
33220110	QA/QC Officer	50.00	HR	0.00	48.79	0.00	\$2,439.32	
33220111	Certified Industrial Hygienist	50.00	HR	0.00	41.88	0.00	\$2,093.83	
33220114	Word Processing/Clerical	58.00	HR	0.00	12.41	0.00	\$719.80	
33220115	Draftsman/CADD	50.00	HR	0.00	19.23	0.00	\$961.64	
33240101	Other Direct Costs	1.00	LS	285.91	0.00	0.00	\$285.91	
	1							

Element: Site Characterization

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33010104 33220102	Car or Van Mileage Charge Project Manager	40.00 107.00	Measure MI HR	Unit Cost 0.34 0.00	Unit Cost 0.00 37.28	Unit Cost 0.00 0.00	Cost \$13.75 \$3,988.94	Override

Total Element Cost

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:41:36 PM

Page: 2 of 3

\$47,514.23

Element: Site Characterization

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost	
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override	
33220103	Office Manager	43.00	HR	0.00	53.05	0.00	\$2,281.27	0.000	
33220105	Project Engineer	66.00	HR	0.00	27.60	0.00	\$1,821.62		
33220106	Staff Engineer	500.00	HR	0.00	21.99	0.00	\$10,996.40		
33220108	Project Scientist	237.00	HR	0.00	22.44	0.00	\$5,318.23		
33220109	Staff Scientist	1,798.00	HR	0.00	21.42	0.00	\$38,512.08		
33220110	QA/QC Officer	86.00	HR	0.00	48.79	0.00	\$4,195.63		
33220111	Certified Industrial Hygienist	51.00	HR	0.00	41.88	0.00	\$2,135.71		
33220112	Field Technician	201.00	HR	0.00	14.98	0.00	\$3,010.20		
33220114	Word Processing/Clerical	288.00	HR	0.00	12.41	0.00	\$3,574.20		
33220115	Draftsman/CADD	198.00	HR	0.00	19.23	0.00	\$3,808.07		
33240101	Other Direct Costs	1.00	LS	1,593.12	0.00	0.00	\$1,593.12		
				\$81,249.22					
		Total 1st Year Technology Cost					\$128,763.45		
			Total		\$128,763.45				

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:41:36 PM

Phase Element Cost Summary Report (with Markups)

Folder: Parker Landfill R04

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001

(Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1
ID: Parker Landfill
Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Design

Type: Remedial Design

Start Date: 2/1/2004

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:41:54 PM

Page: 1 of 2

Phase Element Cost Summary Report (with Markups)

Phase Name	Phase	Approach	Capital Costs	Design %	RD Cost
Pump and Treat	Remedial Action	None	\$6,891,229	20%	\$1,378,246
			Total Phase Element Cost		\$1,378,246
			Escalation		\$44,379
		Esc	alated Phase Element Cost		\$1,422,626

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:41:54 PM

Folder: Parker Landfill R05

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers:

Material 1.0001 Labor 0.7743 (Modified)

Equipment 1.0881

(Modified) (Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1

ID: Parker Landfill

Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: Pump and Treat

Type: Remedial Action

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: Ex Situ

Start Date: 2/1/2004

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults

O&M Markup Template: N/A

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 1 of 21

linit of

Technology: Groundwater Extraction Wells

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
17020203	Demolish Bituminous Pavement with Air Equipment	0.80	CY	0.00	22.98	7.88	\$24.69	Overnoo
33010101	Mobilize/DeMobilize Drilling Rig & Crew	1.00	LS	0.00	633.79	2,231.86	\$2,865.66	
33020303	Organic Vapor Analyzer Rental, per Day	9.00	DAY	110.11	0.00	0.00	\$990.99	
33109660	5,000 Gallon Single-wall Steel Aboveground Tank	1.00	EA	4,200.42	973.18	195.21	\$5,368.81	
33170808	Decontaminate Rig, Augers, Screen (Rental Equipment)	7.00	DAY	104.11	0.00	0.00	\$728.77	
33220112	Field Technician	48.00	HR	0.00	14.98	0.00	\$718.85	
33230103	6" PVC, Schedule 40, Well Casing	400.00	LF	3.82	3.04	10.71	\$7,030.16	
33230157	2" Pitless Adapter	4.00	EA	179.89	0.00	16.80	\$786.76	
33230203	6" PVC, Schedule 40, Well Screen	52.00	LF	8.70	5.07	17.85	\$1,644.38	
33230303	6" PVC, Well Plug	4.00	EA	58.56	7.92	27.90	\$377.53	
33230550	4" Submersible Pump, 33-55 GPM, 161'< Head <=220', 3 hp, w/ controls	4.00	EA	3,111.17	0.00	0.00	\$12,444.69	
33231152	Air Rotary, 10" Dia Borehole (Unconsolidated), 100 ft < Depth <= 500 ft	452.00	LF	0.00	14.48	51.00	\$29,599.54	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 2 of 21

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
7.000.mo.y	200011ption	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33231172	Split Spoon Sample, 2" x 24", During Drilling	46.00	EA	39.78	0.00	0.00	\$1,829.87	
33231182	Furnish 55 Gallon Drum for Drill Cuttings & Development Water	23.00	EA	72.51	0.00	0.00	\$1,667.67	
33231186	Well Development Equipment Rental (weekly)	4.00	WK	219.02	0.00	0.00	\$876.09	
33231403	6" Screen, Filter Pack	52.00	LF	7.28	4.60	16.18	\$1,458.68	
33231813	6" Well, Portland Cement Grout	96.00	LF	9.00	0.00	0.00	\$864.07	
33232103	6" Well, Bentonite Seal	4.00	EA	33.80	28.52	100.43	\$651.03	
33232206	Restricted Area, Well Protection (with 4 Posts & Explosionproof Receptacle)	4.00	EA	518.55	237.89	1.81	\$3,033.00	
33260202	2" Stainless Steel Piping, Schedule 40, Threaded	200.00	LF	16.20	7.72	0.00	\$4,782.94	
		Total Element Cost					\$77,744.16	
		Total 1st Year Technology Cost					\$77,744.16	

Cost Database Date: 2003

Cost Type: User-Defined

Technology: Media Filtration

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	·	•	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020324	12" Structural Slab on Grade	242.00	SF	4.97	2.49	0.45	\$1,914.10	
33130105	7' Diameter Electric Automatic	2.00	EA	18,501.09	2,500.82	1,412.67	\$44,829.15	
	Pressure Filter Unit					•	•	
33260203	3" Stainless Steel Piping,	200.00	LF	33.61	11.57	0.00	\$9,036.40	
	Schedule 40, Threaded							
			Total	Element Cost			\$55,779.65	
		То	tal 1st Year 1	echnology Cos	st		\$55,779.65	

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Carbon Adsorption (Liquid)

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
18020322	8" Structural Slab on Grade	100.00	Measure SF	Unit Cost 3.74	Unit Cost 2.23	Unit Cost 0.41	Cost \$638.43	Override
33132025	200 GPM, 6,000 Lb Fill, High-density Polyethylene-lined Steel, Permanent	2.00	EA	16,001.60	888.75	357.88	\$34,496.44	
33290125	200 GPM, 10 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	3,899.52	1,055.75	0.00	\$4,955.28	
			Total		\$40,090.15			
		То	tal 1st Year T		\$40,090.15			

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Overhead Electrical Distribution

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
20020301	1/0 ACSR Conductor	636.00	LF	0.21	0.44	0.06	\$451.43	
20020310	1/C #2 Aluminum, Bare, Wire	282.00	LF	0.16	0.43	0.06	\$180.99	
20020402	35' Class 3 Treated Power Pole	2.00	EA	284.26	227.56	44.89	\$1,113.43	
20020430	Terminal Structure, 5 KV Pole Top	2.00	EA	1,188.65	855.93	168.84	\$4,426.83	
20020511	5 KV, 3/0, Shielded Cable, Copper	105.00	LF	2.58	1.10	0.22	\$409.56	
20020545	5 KV, 1/0 to 4/0 Conductor, Terminations & Splicing	6.00	EA	458.79	170.87	0.00	\$3,777.97	
20039902	4" Rigid Steel Conduit	35.00	LF	9.09	6.89	0.00	\$559.20	
			Total	Element Cost			\$10,919.41	
		Total 1st Year Technology Cost					\$10,919.41	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 6 of 21

Technology: Residual Waste Management

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33190103	Load Drums on Disposal Vehicle	70.00	EA	0.00	1.46	1.64	\$216.98	
33190204	Transport 55 Gallon Drums of Hazardous Waste, Max 80 drums (per Mile)	150.00	MI	1.58	0.00	0.00	\$237.03	
33190205	Transport Bulk Solid Hazardous Waste, Maximum 20 CY (per Mile)	150.00	MI	1.52	0.00	0.00	\$228.03	
33190317	Waste Stream Evaluation Fee, Not Including 50% Rebate on 1st Shipment	2.00	EA	435.04	0.00	0.00	\$870.09	
33190350	State Disposal Tax (Non-Hazardous, Non-leaking Drums)	70.00	EA	5.00	0.00	0.00	\$350.00	
33190352	State Disposal Tax (Non-Hazardous Bulk Solid)	2.00	CY	5.00	0.00	0.00	\$10.00	
33197205	Landfill Nonhazardous Solid Waste, 55 Gallon Drum	70.00	EA	13.50	0.00	0.00	\$945.00	
33197270	Landfill Nonhazardous Solid Bulk Waste by CY	2.00	CY	131.30	0.00	0.00	\$262.60	
		Total Element Cost					\$3,119.73	
		Total 1st Year Technology Cost					\$3,119.73	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 7 of 21

Technology: Professional Labor Management

Element: Professional Labor Percentage

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
	÷		Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220138	Project Management Labor Cost	1.00	LS	0.00	198,583.66	0.00	\$198,583.66	
33220139	Planning Documents Labor Cost	1.00	LS	0.00	218,442.02	0.00	\$218,442.02	
33220140	Construction Oversight Labor Cost	1.00	LS	0.00	297,875.47	0.00	\$297,875.47	
33220141	Reporting Labor Cost	1.00	LS	0.00	33,097.27	0.00	\$33,097.27	
33220142	As-Built Drawings Labor Cost	1.00	LS	0.00	33,097.27	0.00	\$33,097.27	
33220143	Public Notice Labor Cost	1.00	LS	0.00	3,309.73	0.00	\$3,309.73	
33220144	Site Closure Activities Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220145	Permitting Labor Cost	1.00	LS	0.00	230,486.38	0.00	\$230,486.38	
33220146	Responsible Party Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220147	Reimbursement Claims Preparation Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
33220148	Other Labor Cost	1.00	LS	0.00	0.00	0.00	\$0.00	
			Total Element Cost				\$1,014,891.79	
		Total 1st Year Technology Cost					\$1,014,891.79	

Cost Database Date: 2003 Cost Type: User-Defined

Technology: Groundwater Monitoring Well

Element: Aquifer 1

A = = = = = =	Describette		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Coot	Unit Cont	C4	O
33020303	Organic Vapor Analyzer Rental, per Day	13.00	DAY	110.11	Unit Cost 0.00	Unit Cost 0.00	Cost \$1,431.44	Override
33170808	Decontaminate Rig, Augers, Screen (Rental Equipment)	13.00	DAY	104.11	0.00	0.00	\$1,353.44	
33220112	Field Technician	208.00	HR	0.00	14.98	0.00	\$3,115.03	
33230101	2" PVC, Schedule 40, Well Casing	900.00	LF	1.10	2.11	7.44	\$9,583.02	
33230201	2" PVC, Schedule 40, Well Screen	100.00	LF	2.53	2.73	9.60	\$1,485.19	
33230301	2" PVC, Well Plug	10.00	EΑ	5.33	3.17	11.16	\$196.57	
33231101	Hollow Stem Auger, 8" Dia Borehole, Depth <= 100 ft	1,010.00	LF	0.00	5.79	20.40	\$26,456.24	
33231182	Furnish 55 Gallon Drum for Drill Cuttings & Development Water	53.00	EA	72.51	0.00	0.00	\$3,842.89	
33231401	2" Screen, Filter Pack	120.00	LF	2.84	1.80	6.32	\$1,315.51	•
33231811	2" Well, Portland Cement Grout	870.00	LF	1.06	0.00	0.00	\$921.24	
33232101	2" Well, Bentonite Seal	10.00	EA	8.45	7.13	25.11	\$406.89	
			Total Element Cost				\$50,107.46	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 9 of 21

Element: General Aquifers

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010101	Mobilize/DeMobilize Drilling Rig &	1.00	LS	0.00	633.79	2,231.86	\$2,865.66	
	Crew							
33231504	Surface Pad, Concrete, 2' x 2' x 4"	10.00	EA	37.02	66.05	4.21	\$1,072.83	
			Total	Element Cost			\$3,938.48	
		То	tal 1st Year T	echnology Cos	st		\$54,045.94	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 10 of 21

Technology: Coagulation/Flocculation

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
		-	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020324	12" Structural Slab on Grade	400.00	SF	4.97	2.49	0.45	\$3,163.80	
19010206	3", Class 200, PVC Piping	200.00	LF	0.87	4.20	0.43	\$1,100.94	
33130405	25' Diameter, 208 GPM, Waste	1.00	EA	67.506.75	28,803.33	12,796.32	\$109,106.40	
	Flow, Contact Clarifier			•	,	.,	, ,	
			<u>. </u>					
			I otal	Element Cost			\$113,371.14	
		т.	4-1 4-4 V T		_4		6440.074.44	
		10	tai ist Year i	echnology Cos	ST		\$113,371.14	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 11 of 21

Technology: Metals Precipitation

Element: N/A

Assembly	Description	Overetites	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020322	8" Structural Slab on Grade	900.00	SF	3.74	2.23	0.41	\$5,745.87	0.1011110
33021514	pH/ORP Output Card Dual Propor Alarm	1.00	EA	94.51	22.43	0.00	\$116.93	
33021515	pH/ORP Input Card Isolated 0/4-20 mA	1.00	EA	149.35	22.43	0.00	\$171.77	
33021518	pH Controller with Isolated 4-20 mA Output	1.00	EA	1,254.27	22.43	0.00	\$1,276.70	
33021519	pH Pump Pulser Board for Controller	1.00	EA	252.02	22.43	0.00	\$274.45	
33021520	Analog pH Analyzer with 2 - 12 pH Dials	2.00	EA	674.39	11.21	0.00	\$1,371.20	
33021523	pH Coax Cable (12')	2.00	EA	103.99	11.21	0.00	\$230.41	
33021524	Submersion Assembly	2.00	EA	227.52	11.21	0.00	\$477.46	
33120606	Pumping System	1.00	EA	1,925.19	0.00	0.00	\$1,925.19	
33120611	100 GPM Continuous Neutralization System	1.00	EA	105,155.51	0.00	0.00	\$105,155.51	
33130404	20' Diameter, 130 GPM, Waste Flow, Contact Clarifier	1.00	EA	64,006.40	24,688.57	10,968.27	\$99,663.24	
33260303	3" Polypropylene Pipe Including Fittings	50.00	LF	2.70	4.31	0.00	\$350.54	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 12 of 21

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost	
33290123	-	100 GPM, 5 HP, Transfer Pump with Motor, Valves, Piping	1.00	Measure EA	Unit Cost 3,433.52	Unit Cost 828.83	Unit Cost 0.00	Cost \$4,262.35	Override
			Total	Element Cost			\$221,021.62		
		То		\$221,021.62	1.62				

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 13 of 21

Technology: Metals Precipitation

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021524	Submersion Assembly	2.00	EA	227.52	11.21	0.00	\$477.46	
33120606	Pumping System	1.00	EA	1,925.19	0.00	0.00	\$1,925.19	
33120611	100 GPM Continuous	1.00	EA	105,155.51	0.00	0.00	\$105,155.51	
	Neutralization System						• •	
33130404	20' Diameter, 130 GPM, Waste	1.00	EA	64,006.40	24,688.57	10,968.27	\$99,663.24	
	Flow, Contact Clarifier			,	,	. 5,5 5 5	\$30,000.2 1	
33260303	3" Polypropylene Pipe Including	50.00	LF	2.70	4.31	0.00	\$350.54	
	Fittings			2., 0	1.01	0.00	Ψ000.04	
33290123	100 GPM, 5 HP, Transfer Pump	1.00	EA	3,433.52	828.83	0.00	\$4,262.35	
	with Motor, Valves, Piping		_, .	0,100.02	020.00	0.00	Ψ+,202.00	
33333011	2 CF Filter Press system w/sludge	1.00	EA	32,458.37	0.00	0.00	\$32,458.37	
	tanks,pumps,mixers,sludge cart	1.00		02,400.07	0.00	0.00	φ32, 4 30.37	
	,, , , , , , , , , , , , , , , , , , ,							
			Tota	l Element Cost			\$244,292.66	
		To	tal 1st Vaar 1	Technology Cos	-4		\$2.44.202.cc	
		10	tai ist fear i	ecillology Co	કા		\$244,292.66	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Technology: Advanced Oxidation Processes

Element: N/A

Assembly	Description	Ouantity	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020321	6" Structural Slab on Grade	1,500.00	SF	2.53	1.75	0.19	\$6,700.80	0.0
19040437	2,200 Gallon Conical Bottom Vertical XLPE Tank	2.00	EA	3,008.66	94.81	11.18	\$6,229.31	
19040444	2,200 Gallon Conical Tank Stand	2.00	EA	1,931.70	0.00	0.00	\$3,863.39	
33120803	Peroxide System Mob/Assembly/Shakedown	1.00	EA	9,707.46	0.00	0.00	\$9,707.46	
33120805	Operator Health and Safety Course	1.00	EA	408.37	965.21	0.00	\$1,373.58	
33120824	125 KW High Intensity Ultraviolet, H2O2 Capital Equipment	1.00	EA	208,266.99	13,305.60	27,271.46	\$248,844.05	
33120848	Fugitive Emission Control System	1.00	EA	23,335.24	1,434.92	2,941.04	\$27,711.19	
33130116	0 - 50 GPM Cartridge Filter Equipment	4.00	EA	2,209.33	41.03	0.00	\$9,001.43	
33260203	3" Stainless Steel Piping, Schedule 40, Threaded	100.00	LF	33.61	11.57	0.00	\$4,518.20	
33290125	200 GPM, 10 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	3,899.52	1,055.75	0.00	\$4,955.28	
			Tota	l Element Cost			\$322,904.68	
		Total 1st Year Technology Cost					\$322,904.68	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 15 of 21

Technology: Carbon Adsorption (Gas)

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
18020324	12" Structural Slab on Grade	80.00	SF	4.97	2.49	0.45	\$632.76	
33021501	Saturation Indicator	2.00	EA	45.00	0.00	0.00	\$90.01	
33131981	Dual Bed,1000 CFM Series/2000	2.00	EΑ	20,646,45	0.00	0.00	\$41,292.90	
	CFM Parallel,2000 Lb Fill each			•			•	
33310209	Pressure Gauge	2.00	EA	64.22	33.64	0.00	\$195.71	
	-						·	
			Total	Element Cost			\$42,211.38	
		То	tal 1st Year T	Technology Cos	st		\$42,211.38	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 16 of 21

Technology: Discharge to POTW

Element: N/A

A a a a walla la .	Description	~ "	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
17010107	Medium Brush, Medium Trees, Clear, Grub, Haul	1.00	ACRE	0.00	3,000.24	3,220.75	\$6,220.99	Override
17030259	Cat 225, 1.5 CY, Soil/Sand, Trenching	278.00	CY	0.00	0.33	0.59	\$255.01	
17030260	Cat 225, 1.5 CY, Soil/Sand, 10' - 20' Deep Trench Box, Trench	278.00	CY	0.97	1.09	1.96	\$1,116.14	
17030272	Pull Trench Box, Cat 225, 1.5 CY, Soil/Sand, Trenching	278.00	CY	0.48	1.09	1.96	\$981.51	
17030401	950, 3.00 CY, Backfill with Excavated Material	270.00	CY	0.00	0.41	0.73	\$309.39	
17031001	Wellpoint for Trench, Install & Remove <500', 1 Month	5.00	LFHD	60.94	0.00	0.00	\$304.72	
18050402	Seeding, Vegetative Cover	1.00	ACRE	3,408.77	61.45	59.23	\$3,529.44	
19020126	6" PVC Pipe Sanitary	1,000.00	LF	2.48	3.50	2.05	\$8,021.10	
33197101	Sewer Connection Fee	1.00	EA	1,500.00	0.00	0.00	\$1,500.00	
			Total	Element Cost			\$22,238.30	
		То	tal 1st Year T	echnology Cos	st		\$22,238.30	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Technology: Off-site Transportation and Waste Disposal

Element: N/A

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33190101	Liquid Loading Into 5,000 Gallon Bulk Tank Truck	274.00	EA	0.00	212.53	115.34	\$89,835.67	
33190255	Tanker Trailer Transport Hazardous Waste 300 - 399 Miles	82,200.00	MI	2.24	0.00	0.00	\$184,144.44	
33197278	Landfill Nonhazardous Nonfuel Liquid/Sludge	1,368,750.00	GAL	2.39	0.00	0.00	\$3,271,312.50	
			Total	Element Cost			\$3,545,292.61	
		То	tal 1st Year T	echnology Cos	st		\$3,545,292.61	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 18 of 21

Technology: Miscellaneous Field Installation

Element: N/A

Assembly 33430201	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
	Miscellaneous Minor Field Installation	1.00	Measure LS	Unit Cost 49,134.68	Unit Cost 0.00	Unit Cost 0.00	Cost \$49,134.68	Override
			Total	Element Cost			\$49,134.68	
		Total 1st Year Technology Cost						

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 19 of 21

Technology: ION EXCHANGE

Element: N/A

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021511	Water Flowmeter	6.00	EA	75.01	0.00	0.00	\$450.05	
33021512	pH Chemical Feed Controller without Input Card	1.00	EA	810.90	0.00	0.00	\$810.90	
33021514	pH/ORP Output Card Dual Propor Alarm	1.00	EA	94.51	22.43	0.00	\$116.93	
33021519	pH Pump Pulser Board for Controller	1.00	EA	252.02	22.43	0.00	\$274.45	
33021520	Analog pH Analyzer with 2 - 12 pH Dials	1.00	EA	674.39	11.21	0.00	\$685.60	
33021521	pH Coax Cable (4')	1.00	EA	66.74	11.21	0.00	\$77.95	
33109650	Control Panel, 1 - 8 Single-wall Tanks, Monitoring System	1.00	EA	2,225.22	0.00	0.00	\$2,225.22	
33109724	30,000 Gallon Double-walled Storage Tank, Leak Detection Sensor	2.00	EA	4,355.70	0.00	0.00	\$8,711.39	
33130416	1/3 HP, Single Propeller 4" Diameter Mixer	1.00	EA	1,516.79	44.56	0.00	\$1,561.35	
33290124	150 GPM, 5 HP, Transfer Pump with Motor, Valves, Piping	1.00	EA	4,112.90	1,639.35	0.00	\$5,752.25	
33310206	30 HP, 240 Gallon, 200 PSI, 143 SCFM, Air Compressor	1.00	EA	12,477.63	1,128.79	0.00	\$13,606.42	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Page: 20 of 21

Element: N/A

Assembly	Description	Overstitus	Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33330102	Sodium Hydroxide Solution, 700 Lb Drummed Liquid	50.00	EA	133.01	5.72	3.77	\$7,125.21	
33430201	Miscellaneous Minor Field Installation	1.00	LS	0.00	0.00	452,000.00	\$452,000.00	
			Total	Element Cost			\$493,397.72	
		То	tal 1st Year T	echnology Co		\$493,397.72		
			Total	l Phase Elemen		\$6,310,455.62		

Page: 21 of 21

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/20/2004 10:50:28 AM

Folder: Parker Landfill R04

Project

Name: 170 GPM Parker Landfill ID: 170 GPM Parker Landfill

Location: VERMONT STATE AVERAGE, VERMONT

Modifiers: Material 1.0001 (Modified)

Labor 0.7743

(Modified)

Equipment 1.0881

(Modified)

Category: Groundwater Remediation

Label45

Report Option: Fiscal Year

Site

Name: Alternative 1 ID: Parker Landfill Type: Groundwater

Description: Groundwater Pump and Treat

Phase Element

Name: O&M

Type: Operations & Maintenance

Labor Rate Group: System Labor Rate

Analysis Rate Group: System Analysis Rate

Approach: Ex Situ

Start Date: 2/1/2004

Media/Waste Type: Groundwater

Secondary Media/Waste Type: N/A

Contaminant: Volatile Organic Compounds

(VOCs)

Secondary Contaminant: None

Markup Template: System Defaults O&M Markup Template: System Defaults

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 1 of 9

Technology: Operations and Maintenance (12 - months only)

Element: Miscellaneous

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	M		11-14 O4	11-14 C4	04	0
20040000	D = D'= ()	70.00	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33010202	Per Diem (per person)	72.00	DAY	109.80	0.00	0.00	\$7,905.60	
33010206	Mobilize Crew, Local, per Person	365.00	EA	22.83	0.00	0.00	\$8,332.15	
33010423	Disposable Gloves (Latex)	1,204.00	PAIR	0.21	0.00	0.00	\$246.82	
33010425	Disposable Coveralls (Tyvek)	1,204.00	EA	4.36	0.00	0.00	\$5,251.49	
33190340	Non Haz Drummed Site Waste - Load, Transp, & Landfill Disp (55-Gal Drums)	31.00	EA	200.48	0.00	0.00	\$6,214.99	
33199921	DOT Steel Drum, 55 Gallon	31.00	EA	72.51	0.00	0.00	\$2,247.73	
33220104	Senior Staff Engineer	81.00	HR	0.00	37.21	0.00	\$3,014.16	
33220112	Field Technician	365.00	HR	0.00	14.98	0.00	\$5,466.28	
33240104	Startup Costs	1.00	LS	56,132.04	56,132.04	28,066.02	\$140,330.11	
33420101	Electrical Charge	13,145,160.00	KWH	0.07	0.00	0.00	\$857,064.69	
99999001	Other	1.00	LS	300,000.00	0.00	0.00	\$300,000.00	
			Tota	l Element Cost			\$1,336,074.00	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 2 of 9

Element: Groundwater Extraction Wells

			lluit of	Barrial	l -b	E	Parkasalasi	0.4
Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	·	.	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220106	Staff Engineer	60.00	HR	0.00	21.99	0.00	\$1,319.57	
33220112	Field Technician	195.00	HR	0.00	14.98	0.00	\$2,920.34	
33420101	Electrical Charge	56,344.00	KWH	0.07	0.00	0.00	\$3,673.63	
			Total	Element Cost			\$7,913.54	
Element: M	ledia Filtration							
			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220106	Staff Engineer	86.00	HR	0.00	21.99	0.00	\$1,891.38	
33220112	Field Technician	539.00	HR	0.00	14.98	0.00	\$8,072.12	
33420101	Electrical Charge	19,994.00	KWH	0.07	0.00	0.00	\$1,303.61	
			Total	Element Cost			\$11,267.11	
Element: C	arbon Adsorption (Liquid)							

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33132052	Coal-based General Purpose, 8 x 30 Sieve, 900 Iodine, 2,000 - 10,000 Lb	12,000.00	Measure LB	Unit Cost 0.94	Unit Cost 0.00	Unit Cost 0.00	Cost \$11,281.20	Override

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 3 of 9

Element: Carbon Adsorption (Liquid)

A = = = = = =	Depoletto		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33132065	Removal, Transport, Regeneration of Spent Carbon, < 2K lb	12,000.00	LB	0.61	0.00	0.00	\$7,267.20	Override
33220106	Staff Engineer	96.00	HR	0.00	21.99	0.00	\$2,111.31	
33220112	Field Technician	529.00	HR	0.00	14.98	0.00	\$7,922.36	
33420101	Electrical Charge	27,974.00	KWH	0.07	0.00	0.00	\$1,823.90	
			Total	Element Cost			\$30,405.97	

Element: Coagulation/Flocculation

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
•	Description	Quality	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220106	Staff Engineer	153.00	HR	0.00	21.99	0.00	\$3,364.90	
33220112	Field Technician	595.00	HR	0.00	14.98	0.00	\$8,910.78	
33330127	Non-ionic Polymeric Flocculant	6,084.00	LB	3.51	0.00	0.00	\$21,366.40	
33420101	Electrical Charge	78,939.00	KWH	0.07	0.00	0.00	\$5,146.82	
			Total	Element Cost			\$38,788.90	

Cost Database Date: 2003

Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 4 of 9

Element: Metals Precipitation

	.		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity	Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons), Water Analysis	4.00	EA	130.70	0.00	0.00	\$522.82	Override
33022132	Purgeable Åromatics (SW 5030B/SW 8021B Aromatics), Water Analysis	4.00	EA	103.85	0.00	0.00	\$415.39	
33220106	Staff Engineer	196.00	HR	0.00	21.99	0.00	\$4,310.59	
33220112	Field Technician	880.00	HR	0.00	14.98	0.00	\$13,178.97	
33330111	Sulfuric Acid Solution, 750 Lb Drummed Liquid	85.00	EA	75.01	5.72	3.77	\$7,182.36	
33330117	Hydrated Lime, Powdered, Bulk	92.00	TON	98.25	0.01	0.01	\$9,040.02	
33420101	Electrical Charge	73,904.00	KWH	0.07	0.00	0.00	\$4,818.54	
			Total	Element Cost			\$39,468.68	

Element: Metals Precipitation

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons), Water Analysis	4.00	Measure EA	Unit Cost 130.70	Unit Cost 0.00	Unit Cost 0.00	Cost \$522.82	Override

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 5 of 9

Element: Metals Precipitation

	—		Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity					_	
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022132	Purgeable Aromatics (SW	4.00	EA	103.85	0.00	0.00	\$415.39	
	5030B/SW 8021B Aromatics),							
	Water Analysis							
33220106	Staff Engineer	236.00	HR	0.00	21.99	0.00	\$5,190.30	
33220112	Field Technician	890.00	HR	0.00	14.98	0.00	\$13,328.73	
33330111	Sulfuric Acid Solution, 750 Lb	85.00	EA	75.01	5.72	3.77	\$7,182.36	
	Drummed Liquid						**,***	
33330117	Hydrated Lime, Powdered, Bulk	92.00	TON	98.25	0.01	0.01	\$9,040.02	
33333011	2 CF Filter Press system w/sludge	2.00	EA	32,458.37	0.00	0.00	\$64,916.74	
00000011	tanks,pumps,mixers,sludge cart	2.00		32,430.37	0.00	0.00	Ψ04,910.74	
33420101	Electrical Charge	93,854.00	KWH	0.07	0.00	0.00	\$6,119.28	
			T-4-1	Flowart Coat			\$40C 74E CO	

Total Element Cost

\$106,715.63

Element: Advanced Oxidation Processes

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
33022131	Purgeable Halocarbons (SW 5030B/SW 8021B Halocarbons),	4.00	Measure EA	Unit Cost 130.70	Unit Cost 0.00	Unit Cost 0.00	Cost \$522.82	Override
	Water Analysis							

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 6 of 9

Element: Advanced Oxidation Processes

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33022132	Purgeable Aromatics (SW 5030B/SW 8021B Aromatics), Water Analysis	4.00	EA	103.85	0.00	0.00	\$415.39	
33120851	7.5 KW Ultraviolet Source High Intensity Lamp	105.00	EA	175.01	0.00	0.00	\$18,376.49	
33132917	Propane	54,250.00	GAL	1.48	0.00	0.00	\$80,094.70	
33220106	Staff Engineer	224.00	HR	0.00	21.99	0.00	\$4,926.39	
33220112	Field Technician	817.00	HR	0.00	14.98	0.00	\$12,235.47	
33330171	Hydrogen Peroxide, 50% Solution, 500 Lb Drums	690.00	EA	890.09	0.00	0.00	\$614,161.41	
33420101	Electrical Charge	542,510.00	KWH	0.07	0.00	0.00	\$35,371.65	
			Total	Element Cost			\$766,104.32	

Element: Carbon Adsorption (Gas)

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33021803	Tentative ID Compunds, GC/MS, Air (30/5041/8260B - TO-14), Air Analysis	2.00	EA	138.01	0.00	0.00	\$276.03	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 7 of 9

Element: Carbon Adsorption (Gas)

			Unit of	Material	Labor	Equipment	Extended	Cost
Assembly	Description	Quantity						
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33131942	Coal-based, 4 mm Pellet, for	12,000.00	LB	0.99	0.00	0.00	\$11,881.20	
	Solvent Recovery 2,000 - 10,000							
	Lb							
33132065	Removal, Transport, Regeneration	12,000.00	LB	0.61	0.00	0.00	\$7,267.20	
	of Spent Carbon, < 2K lb						•	
33220106	Staff Engineer	119.00	HR	0.00	21.99	0.00	\$2,617.14	
33220112	Field Technician	485.00	HR	0.00	14.98	0.00	\$7,263.41	
33420101	Electrical Charge	71.554.00	KWH	0.07	0.00	0.00	\$4,665.32	
	V -	11,001100		0.0.	0.00	0.00	\$.,000.0L	
			Total	Element Cost			\$33,970.30	

Element: Discharge to POTW

Assembly	Description	Quantity	Unit of	Material	Labor	Equipment	Extended	Cost
			Measure	Unit Cost	Unit Cost	Unit Cost	Cost	Override
33220106	Staff Engineer	16.00	HR	0.00	21.99	0.00	\$351.88	
33220112	Field Technician	80.00	HR	0.00	14.98	0.00	\$1,198.09	
33420101	Electrical Charge	18,033.00	KWH	0.07	0.00	0.00	\$1,175.75	
	Total Element Cost						\$2,725.72	

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 8 of 9

Total 1st Year Technology Cost
Runtime Percent Cost Adjustment
O & M Total Cost

97% \$2,302,231.14

\$2,373,434.17

Total Phase Element Cost

\$2,302,231.14

Cost Database Date: 2003 Cost Type: User-Defined

Print Date: 5/19/2004 2:42:29 PM

Page: 9 of 9